FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

For proposed Texas Pollutant Discharge Elimination System (TPDES) Permit No. 01811 (TX0063215) to discharge to water in the state.

Issuing Office:	Texas Commission on Environmental Quality P.O. Box 13087 Austin, Texas 78711-3087
Applicant:	Southwestern Electric Power Company Welsh Power Plant 1187 County Road 4865 Pitttsburg, Texas 75686
Prepared By:	Kimberly Wilson Wastewater Permitting Section Water Quality Division (512) 239-4644
Date:	April 24, 2003
Permit Action:	Amendment; TPDES Permit No. 01811

I. EXECUTIVE DIRECTOR RECOMMENDATION

The Executive Director has made a preliminary decision that this permit, if issued, meets all statutory and regulatory requirements. It is proposed the permit be issued to expire on three years from the date of permit issuance, in accordance with the variance extension.

II. APPLICANT ACTIVITY

The applicant currently operates the Welsh Power Plant.

III. DISCHARGE LOCATION

The plant site is located approximately two miles northwest of the Town of Cason and approximately one and one-half miles north of State Highway 11, Titus County, Texas. Outfalls 001 and 003 discharge to Welsh Reservoir; thence to Swauano Creek; thence to Big Cypress Creek Below Lake Bob Sandlin in Segment No. 0404 of the Cypress Creek Basin.

IV. RECEIVING STREAM USES

The unclassified receiving waters have high aquatic life use for Welsh Reservoir. The designated uses for Segment No. 0404 are intermediate aquatic life use and contact recreation.

Segment No. 0404 is water quality limited.

V. STREAM STANDARDS

The general criteria and numerical criteria which make up the stream standards are provided in the Texas Administrative Code, 30 TAC §307.1 - §307.10, effective April 30, 1997.

the technical summary and/or fact sheet), and draft permit are available for viewing and copying at the Mount Pleasant Public Library, 213 North Madison Street, Mount Pleasant, Texas.

PUBLIC COMMENT / PUBLIC MEETING. You may submit public comments or request a public meeting about this application. The purpose of a public meeting is to provide the opportunity to submit written or oral comment or to ask questions about the application. Generally, the TCEQ will hold a public meeting if the executive director determines that there is a significant degree of public interest in the application or if requested by a local legislator. A public meeting is not a contested case hearing.

Written public comments and requests for a public meeting should be submitted to the Office of the Chief Clerk, MC 105, TCEQ, P.O. Box 13087, Austin, TX 78711-3087 within 30 days of the date of newspaper publication of this notice.

OPPORTUNITY FOR A CONTESTED CASE HEARING. After the deadline for public comments, the executive director will consider the comments and prepare a response to all relevant and material, or significant public comments. **The response to comments, along with the executive director's decision on the application, will be mailed to everyone who submitted public comments or who requested to be on a mailing list for this application. If comments are received, the mailing will also provide instructions for requesting a contested case hearing or reconsideration of the executive director's decision.** A contested case hearing is a legal proceeding similar to a civil trial in a state district court.

A contested case hearing will only be granted based on disputed issues of fact that are relevant and material to the Commission's decision on the application. Further, the Commission will only grant a hearing on issues that were raised during the public comment period and not withdrawn. Issues that are not raised in public comments may not be considered during a hearing.

EXECUTIVE DIRECTOR ACTION. The executive director may issue final approval of the application unless a timely contested case hearing request or a timely request for reconsideration is filed. If a timely hearing request or request for reconsideration is filed, the executive director will not issue final approval of the permit and will forward the application and requests to the TCEQ Commissioners for their consideration at a scheduled Commission meeting.

MAILING LISTS. In addition to submitting public comments, you may ask to be placed on a mailing list to receive future public notices mailed by the Office of the Chief Clerk. You may request to be added to: (1) the mailing list for this specific application; (2) the permanent mailing list for a specific applicant name and permit number; and/or (3) the permanent mailing list for a specific county. Clearly specify which mailing list(s) to which you wish to be added and send your request to the TCEQ Office of the Chief Clerk at the address above. Unless you otherwise specify, you will be included only on the mailing list for this specific application.

INFORMATION. If you need more information about this permit application or the permitting process, please call the TCEQ Office of Public Assistance, Toll Free, at 1-800-687-4040. General information about the TCEQ can be found at our web site at www.tceq.state.tx.us.

Further information may also be obtained from Southwestern Electric Power Company at the address stated above or by calling Mr. Franklin Mills at (214) 777-1507.

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VI. DISCHARGE DESCRIPTION

The following is a quantitative description of the discharge described in the Monthly Effluent Report data for the period December 2000 through December 2002. The "Average of Daily Avg." values presented in the following table are the average of all daily average values for the reporting period for each parameter. The "Maximum of Daily Max." values presented in the following table are the individual maximum values for the reporting period for each parameter:

A. Flow

Outfall	Frequency	Average of Daily Avg (MGD)	Maximum of Daily Max (MGD)
001	Continuous	14.05	22.34
101	Intermittent	No data available	
002	Intermittent	0.004	0.004
003	Continuous	1,053.32	1,218.24

B. Temperature (degrees F)

Outfall	Daily Avg.	Daily Max.
001	97.04	117

C. Effluent Characteristics

Outfall	Parameter	Average of Daily Avg.	Maximum of Daily Max.
001	Total Suspended Solids	16.6 mg/L	38 mg/L
		1,982.9 lbs/day	4,844.2 lbs/day
	Oil and grease	0.2 mg/L	4.0 mg/L
		287.3 lbs/day	611.7 lbs/day
	Selenium, total	0.0066 mg/L	0.014 mg/L
		0.752 lbs/day	1.61 lbs/day
	Aluminum, total	3.4 mg/L	6.5 mg/L
		401.7 lbs/day	767.1 lbs/day
	pH	7.2 S.U. (min)	8.9 S.U. (max)
002 (Outfall 103 in draft permit)	Biochemical Oxygen Demand (5-day)	4.6 mg/L	20 mg/L
		0.152 lbs/day	0.667 lbs/day
	Total Suspended Solids	3.62 mg/L	12.0 mg/L
		0.121 lbs/day	0.667 lbs/day
	Chlorine, Total Residual	1.0 mg/L (min)	4.0 mg/L (max)
	pH	6.4 S.U. (min)	7.9 S.U. (max)
	Copper, Total	10.5 mg/L	79.5 mg/L
003	Chlorine, Free Available	0 mg/L	0 mg/L
		58.03 lbs/day	95.25 lbs/day
	Chlorine, Total Residual	N/A	0.1 mg/L
		N/A	95.25 lbs/day

A review of the data summarized above indicates that the permittee has been compliant with the terms of the current permit from December 2000 through December 2002.

VII. PROPOSED EFFLUENT LIMITATIONS

Final effluent limitations are established in the draft permit as follows:

Outfall No.	Parameter	Daily Average	Daily Maximum
001	Flow (MGD)	(20)	(60)
	Total Suspended Solids	30 mg/L	100 mg/L
		5,007 lbs/day	16,690 lbs/day
	Oil and Grease	15 mg/L	20 mg/L
		2,504 lbs/day	3,338 lbs/day
	Selenium, Total	0.013 mg/L	0.027 mg/L
		2.17 lbs/day	4.51 lbs/day
	Aluminum, Total	Report mg/L	Report mg/L
		Report lbs/day	Report lbs/day
	pH	Between 6.0 and 9.0 standard units.	
101	Flow (MGD)	(Report)	(Report)
	Iron, Total	1.0 mg/L	1.0 mg/L
	Copper, Total	0.5 mg/L	1.0 mg/L
003	Flow (MGD)	(1,425)	(1,425)
	Temperature (°F)	(Report)	(Report)
	Free Available Chlorine	0.2 mg/L	0.5 mg/L
		198 lbs/day	495 lbs/day
	Total Residual Chlorine	N/A	0.2 mg/L
		N/A	198 lbs/day
103	Flow (MGD)	(0.006)	(0.010)
	Biochemical Oxygen Demand (5-day)	20 mg/L	45 mg/L
		1.0 lbs/day	2.3 lbs/day
	Total Suspended Solids	20 mg/L	45 mg/L
		1.0 lbs/day	2.3 lbs/day
	Total Residual Chlorine	Between 1.0 and 4.0 mg/L	
	pH	Between 6.0 and 9.0 standard units	

Chronic and acute biomonitoring requirements are included in the draft permit at Outfalls 001 and 003 based upon recommendations from the Water Quality Assessment Team in TCEQ Interoffice Memorandum dated January 30, 2003.

The effluent limitations listed above for Outfalls 001, 101, 003, and 103 are continued from the existing permit and, when applicable, are consistent with 40 CFR Part 423 and 30 TAC 309.

VIII. SUMMARY OF CHANGES FROM APPLICATION

The applicant has requested the following amendments to the current permit:

1. *Reduction in the monitoring frequencies for total suspended solids and oil and grease at Outfall 001 from once per two weeks to once per month.* The permittee has supported this request with historical data for total suspended solids and oil and grease data from July 1999 through June 2002.

See the next section for additional changes to the existing permit.

IX. SUMMARY OF CHANGES FROM EXISTING PERMIT

1. The "Definitions and Standard Permit Conditions," "Other Requirements," and "Biomonitoring" sections of this permit have been revised to include updated language.

2. The description of authorized discharges at Outfalls 001 and 003 has been clarified to include the discharge of storm water.

X. DRAFT PERMIT RATIONALE

The following section sets forth the statutory and regulatory requirements considered in preparing the draft permit. Also set forth are any calculations or other necessary explanations of the derivation of specific effluent limitations and conditions, including a citation to the applicable effluent limitation guidelines and water quality standards.

A. REASON FOR PERMIT ISSUANCE

The applicant has applied to the Texas Commission on Environmental Quality (TCEQ) for a major amendment to Permit No. 01811 to authorize a reduction in monitoring frequency for total suspended solids and oil and grease at Outfall 001; reclassification of external Outfall 002 as internal Outfall 103; removal of total copper effluent limitations at Outfall 002 (proposed reclassification as internal Outfall 103); and an increase in the daily maximum free available chlorine effluent limitation at Outfall 003. The current permit authorizes the discharge of low volume wastes, ash transport water, and previously monitored effluents at a daily average flow not to exceed 20,000,000 gallons per day via Outfall 001; coal pile runoff, metal cleaning wastes, and storm water on an intermittent and flow variable basis via Outfall 101; treated domestic wastewater at a daily average flow not to exceed 6,000 gallons per day via Outfall 002; and once through cooling water at a daily average flow not to exceed 1,425,000,000 gallons per day via Outfall 003. The application also includes a request for an extension of the previously authorized temporary variance to the existing water quality standards for the aluminum criterion for Big Cypress Creek Below Lake Bob Sandlin, in Segment No. 0404 of the Cypress Creek River Basin. The permittee has conducted a water quality study of Big Cypress Creek Below Lake Bob Sandlin, consisting of a water effects ratio (WER) and development of site specific criterion for aluminum, into which wastewaters via Outfalls 001 and 003 are discharged. The 2000 Texas Surface Water Quality Standards (30 TAC Chapter 307), adopted by the Commission on July 26, 2000, include provisions allowing the use of approved water effects ratios in calculating water quality based effluent limitations. The WER for aluminum for Big Cypress Creek Below Lake Bob Sandlin, in Segment No. 0404 of the Cypress Creek River Basin, and the 2000 Texas Surface Water Quality Standards have been submitted to the United States Environmental Protection Agency for approval. The permittee has requested an extension to the current temporary variance pending United States Environmental Protection Agency approval of the WER and 2000 Texas Surface Water Quality Standards.

B. WATER QUALITY SUMMARY

The discharge route is to Welsh Reservoir; thence to Swauano Creek; thence to Big Cypress Creek Below Lake Bob Sandlin, Segment No. 0404 of the Cypress Creek Basin. The unclassified

The historical data submitted for both parameters shows that the permittee has been in compliance with effluent limitations for these parameters for the period of July 1999 through June 2002. This amendment has been recommended for approval based on the exemplary compliance record, and the monitoring frequency for both total suspended solids and oil and grease has been included in the draft permit at once per month.

2. *The permittee has requested clarification of the language in Outfalls 001 and 101 regarding the discharge of metal cleaning wastes and chemical metal cleaning wastes.* The permit has been revised to reference previously monitored effluents for the discharge of Outfall 101 wastes via Outfall 001. Outfall 101 language now authorizes the discharge of metal cleaning wastes, which include chemical metal cleaning wastes. By structuring the language at Outfalls 001 and 101 in this manner, it provides the permittee maximum flexibility in managing wastewater at these outfalls.

3. *An increase in the daily maximum concentration-based effluent limitations for free available chlorine at Outfall 003.* The permittee feels that the current daily maximum concentration-based effluent limitation for free available chlorine is included in the current permit as a result of a technical error made in the last permit action. The daily maximum concentration-based effluent limitation for free available chlorine is established at 0.2 mg/L in the current permit while daily maximum mass-based effluent limitations included in the permit are based upon a concentration of 0.5 mg/L. Federal guidelines in 40 CFR, Part 423 prescribe a daily maximum effluent limitation of 0.5 mg/L. After reviewing the fact sheet for the current permit, dated November 24, 2000, it is clear the permit writer intended to establish the daily maximum concentration-based effluent limitation at 0.5 mg/L, and inclusion of the 0.2 mg/L limitation is in error. Therefore, this amendment is recommended for approval in the draft permit. This amendment meets exemption requirements under 40 CFR, Part 122.44(l), Antibacksliding.

4. *Reclassification of external Outfall 002 as internal Outfall 103.* Current Outfall 002 is located immediately adjacent to the facility intake structure. Both current Outfall 002 and the intake structure are located within a small inlet of Welsh Reservoir, and the location coupled with the volume and velocity at the intake structure results in the discharge at Outfall 002 flowing directly into the intake structure. Based upon this information, this amendment is recommended for approval in the draft permit. This outfall has been renumbered as Outfall 103.

5. *Removal of total copper effluent limitations and monitoring requirements at current Outfall 002 (proposed reclassification as internal Outfall 103).* The draft permit proposes approval of the reclassification of current Outfall 002 as internal Outfall 103. As an internal outfall, the discharge of treated domestic wastewater would not be evaluated as a direct discharge and water quality-based effluent limitations would not be applicable (external Outfall 003 would be evaluated and water quality-based effluent limitations are established, if necessary). Based on reclassification of this outfall, the permittee has requested that the existing water quality-based monitoring requirements and proposed effluent limitations be removed. This amendment is recommended for approval in the draft permit. This amendment meets exemption requirements under 40 CFR, Part 122.44(l), Antibacksliding.

6. *The permittee has requested that TCEQ recognize the addition of another ash pond in the "Other Requirements" section of this permit.* Other Requirements No. 5. of the draft permit formally recognizes this new ash pond.

The discharges of low volume wastes, ash transport water, and coal pile runoff via Outfall 001; metal cleaning wastes via Outfall 101; and once through cooling water Outfall 003 from this facility are subject to federal effluent limitation guidelines at 40 CFR Part 423. A new source determination was performed and the discharges of low volume wastes, ash transport water, metal cleaning wastes, coal pile runoff, and once through cooling water are not a new sources as defined at 40 CFR § 122.2. Therefore new source performance standards (NSPS) are not required for this discharge. Treated domestic wastewater, discharged via Outfall 103, is subject to technology based effluent limitations in 30 TAC 309.

The discharge of storm water via Outfalls 001 and 003 is not subject to federal effluent limitation guidelines and any technology-based effluent limitations are based on best professional judgement.

The following wastewaters are generated at this facility: cooling water (once through condenser, once through cooling towers, miscellaneous once through, and HDVC cooling), low volume wastes (plant drains and sumps, hydrovactor water, plant washdown, laboratory drains, boiler blowdown, and demineralizer regenerant), ash transport/bottom ash water, coal pile runoff, metal cleaning wastes, domestic sewage, and storm water. Plant drains and sumps are initially routed to the ecology pit. Wastewater from the ecology pit, hydrovactor water, plant washdown, coal pile runoff, laboratory drains, boiler blowdown, demineralizer regenerant, and ash transport water are routed to the primary settling pond. Wastewater from the primary settling pond and storm water from the ash landfill are routed to the Secondary settling pond where they discharge on an intermittent and flow variable basis via Outfall 001. Bottom ash and low volume wastes are routed through oil water separators prior to being routed to the Primary Settling Pond. All wastewater routed to the Primary and Secondary Settling Ponds are subject to pH neutralization and solids settling in the ponds. Metal cleaning wastes are discharged on an intermittent and flow variable basis via Outfall 101. Metal cleaning wastes are subject to chemical precipitation/flocculation, solids settling and pH neutralization prior to discharge at Outfall 101. Cooling water is discharged without treatment at a daily average flow not to exceed 1,425 million gallons per day. Additionally, the discharge of once through cooling water from the cooling towers discharges directly to Welsh Reservoir. The permittee monitors the flow of this discharge and includes that data at Outfall 003. Treated domestic sewage is routed to a package treatment plan prior to discharge at a daily average flow not to exceed 0.006 MGD via Outfall 103.

2. CALCULATIONS

See Appendix A of this fact sheet for calculations and further discussion of technology-based effluent limitations proposed in the draft permit.

D. WATER QUALITY-BASED EFFLUENT LIMITATIONS/CONDITIONS

1. GENERAL COMMENTS

The Texas Surface Water Quality Standards found at 30 TAC Chapter 307 state that "surface waters will not be toxic to man from ingestion of water, consumption of aquatic organisms, or contact with the skin, or to terrestrial or aquatic life." The methodology

receiving waters have high aquatic life use for Welsh Reservoir. The designated uses for Segment No. 0404 are intermediate aquatic life use and contact recreation. Effluent limitations and/or conditions established in the draft permit are in compliance with state water quality standards and the applicable water quality management plan. The effluent limits in the draft permit will maintain and protect the existing instream uses. No significant degradation of high quality receiving waters is anticipated. Additional discussion of the water quality aspects of the draft permit will be found at Section X.D. of this fact sheet.

There is no priority watershed of critical concern with respect to endangered and threatened species in Segment No. 0404 in Titus County. Therefore, no endangered or threatened aquatic or aquatic dependent species (including proposed species) occur in this area. This determination was made by referencing Appendix A of the U.S. Fish and Wildlife Service biological opinion, dated September 14, 1998, on the State of Texas authorization of the Texas Pollutant Discharge Elimination System.

Segment No. 0404 is currently listed on the State's inventory of impaired and threatened waters (the Clean Water Act Section 303(d) list). The fish consumption use is not supported in Welsh Reservoir, based on a no-consumption advisory and a restricted-consumption advisory issued by the Texas Department of Health in May 1992 due to elevated levels of selenium in fish tissue. Low dissolved oxygen concentrations may be an intermittent but chronic problem and are a concern to regional interests. TMDL projects for dissolved oxygen and selenium are underway. The discharge at Outfall 001 at this facility is monitored for total selenium. Additionally, the current and draft permits require the permittee to implement a Selenium Monitoring Program. The draft permit recommends the monitoring requirements for total selenium at Outfall 001 and the Selenium Monitoring Program be extended through the term of the permit to allow further evaluation of impact to selenium impairments. The current and draft permits include biochemical oxygen demand (5-day) effluent limitations for the discharge of treated domestic wastewater via current Outfall 002 (proposed reclassification as internal Outfall 103). These effluent limitations are protective of the receiving water body and should not cause or contribute to dissolved oxygen impairments within the segment.

C. TECHNOLOGY-BASED EFFLUENT LIMITATIONS/CONDITIONS

1. GENERAL COMMENTS

Regulations promulgated in Title 40 of the Code of Federal Regulations require technology-based limitations be placed in wastewater discharge permits based on effluent limitations guidelines, where applicable, and/or on best professional judgment (BPJ) in the absence of guidelines.

The proposed draft permit authorizes the discharge of low volume wastes, ash transport water, coal pile runoff, storm water, and previously monitored effluents (metal cleaning wastes) via Outfall 001 at a daily average flow not to exceed 20 MGD and a daily maximum flow not to exceed 60 MGD; metal cleaning wastes via Outfall 101 on an intermittent and flow variable basis; once through cooling water, storm water, and previously monitored effluents via Outfall 003 at a daily average flow not to exceed 1,245 MGD and a daily maximum flow not to exceed 1,425 MGD; and treated domestic wastewater via Outfall 103 at a daily average flow to exceed 0.006 MGD and a daily maximum flow not to exceed 0.010 MGD.

Outfall 003

Self report data indicates the two-year highest daily average flow from Outfall 003 is 1,218.24 million gallons per day (MGD). TCEQ uses the EPA horizontal jet plume model to estimate dilutions at the edge of the ZID and aquatic life mixing zone (MZ) for discharges greater than 10 MGD into lakes and reservoirs. General assumptions used in the horizontal jet plume model are: a non-buoyant discharge, a submersed pipe, and no cross flow. Based on this analysis the following effluent dilutions are calculated:

Outfall 003 ZID:	100%
Outfall 003 aquatic life (MZ):	100%

Wasteload allocations (WLAs) are calculated using the above estimated effluent dilutions, criteria outlined in the Texas Surface Water Quality Standards, and partitioning coefficients for metals (when appropriate and designated in the implementation procedures). The WLA is the end-of-pipe effluent concentration which can be discharged, when after mixing in the receiving stream, instream numerical criteria will not be exceeded. From the WLA, a long term average (LTA) is calculated using a log normal probability distribution, a given coefficient of variation (0.6), and a 99th percentile confidence level. The LTA is the long term average effluent concentration calculated to meet the WLA using a selected percentile confidence level. The lower of the two LTAs (acute and chronic) is used to calculate a daily average and daily maximum effluent limitation for the protection of aquatic life using the same statistical considerations with the 99th percentile confidence level and a standard number of monthly effluent samples collected (12).

TCEQ practice for determining significant potential is to compare the reported analytical data against percentages of the calculated daily average water quality-based effluent limitation. Permit limitations are required when analytical data reported in the application exceeds 85% of the calculated daily average water quality-based effluent limitation. Monitoring and reporting is required when analytical data reported in the application exceeds 70% of the calculated daily average water quality-based effluent limitation.

b. PERMIT ACTION

Reported analytical data for the following parameters exceeded 85% of the calculated daily average water quality-based effluent limitation for aquatic life protection:

Outfall 001:	Aluminum, total
Outfall 003:	None

Reported analytical data for the following parameters exceeded 70% of the calculated daily average water quality-based effluent limitation for aquatic life protection, but was less than 85% of the calculated daily average water quality-based effluent limitation for aquatic life protection:

outlined in the "Implementation of the Texas Commission on Environmental Quality Standards via Permitting" is designed to insure compliance with 30 TAC Chapter 307. Specifically, the methodology is designed to insure that no source will be allowed to discharge any wastewater which: (1) results in instream aquatic toxicity; (2) causes a violation of an applicable narrative or numerical state water quality standard; (3) results in the endangerment of a drinking water supply; or (4) results in aquatic bioaccumulation which threatens human health.

TPDES permits contain technology-based effluent limits reflecting the best controls available. Where these technology-based permit limits do not protect water quality or the designated uses, additional water quality-based effluent limitations and/or conditions are included. State narrative and numerical water quality standards are used in conjunction with EPA criteria and other toxicity data bases to determine the adequacy of technology-based permit limits and the need for additional water quality-based controls.

2. AQUATIC LIFE CRITERIA

a. SCREENING

Analytical data reported in the application for Outfalls 001 and 003 were screened against calculated water quality-based effluent limitations for the protection of aquatic life. Water quality-based effluent limitations were calculated from freshwater aquatic life criteria found in Table 1 of the Texas Surface Water Quality Standards (30 TAC Chapter 307). The discharges of metal cleaning wastes via internal Outfall 101 and treated domestic wastewater via Outfall 103 are not subject to screening against water quality-based effluent limitations.

Acute freshwater criteria are applied at the edge of the zone of initial dilution (ZID) and chronic freshwater criteria are applied at the aquatic life mixing zone. The ZID for discharges into lakes and reservoirs is defined as radius of 25 feet from the point where the discharge enters Welsh Reservoir. The aquatic life mixing zone (MZ) for discharges into lakes and reservoirs is defined as a radius of 100 feet from the point where the discharge enters Welsh Reservoir.

Outfall 001

Self report data indicates the two-year highest daily average flow from Outfall 001 is 15.86 million gallons per day (MGD). TCEQ uses the EPA horizontal jet plume model to estimate dilutions at the edge of the ZID and aquatic life mixing zone (MZ) for discharges greater than 10 MGD into lakes and reservoirs. General assumptions used in the horizontal jet plume model are: a non-buoyant discharge, a submersed pipe, and no cross flow. Based on this analysis the following effluent dilutions are calculated:

Outfall 001 ZID:	71%
Outfall 001 aquatic life (MZ):	18%

conditions required for EPA classified major facilities are proposed in the draft permit at Outfall 001.

Outfall 003

The existing permit includes chronic freshwater biomonitoring requirements at Outfall 003. A review of the whole effluent toxicity testing database for Outfall 003 indicates that, in the past five years, the permittee has performed thirty chronic tests, one of which demonstrated statistically significant toxicity: *Ceriodaphnia dubia*, 8/18/98, sublethality, NOEC 32%. However persistent, significant lethality was never demonstrated. Analytical data submitted with the application does not indicate violation of any numerical water quality-based effluent limitation for aquatic life protection, therefore minimum chronic freshwater biomonitoring conditions required for EPA classified major facilities are proposed in the draft permit at Outfall 003.

b. PERMIT ACTION

The provisions of this section apply to Outfalls 001 and 003.

Based on information contained in the permit application, TCEQ has determined that there may be pollutants present in the effluent(s) which may have the potential to cause toxic conditions in the receiving stream.

Whole effluent biomonitoring is the most direct measure of potential toxicity which incorporates the effects of synergism of effluent components and receiving stream water quality characteristics. Biomonitoring of the effluent is, therefore, required as a condition of this permit to assess potential toxicity. The biomonitoring procedures stipulated as a condition of this permit are as follows:

i) Chronic static renewal 7-day survival and reproduction test using the water flea (Ceriodaphnia dubia) (Method 1002.0). The frequency of the testing is once per six months.

ii) Chronic static renewal 7-day larval survival and growth test using the fathead minnow (Pimephales promelas) (Method 1001.0). The frequency of the testing is once per six months.

Toxicity tests shall be performed in accordance with protocols described in the latest revision of the "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Third Edition," EPA-600-4-91-002. The stipulated test species are appropriate to measure the toxicity of the effluent consistent with the requirements of the state water quality standards. The biomonitoring frequency has been established to reflect the likelihood of ambient toxicity and to provide data representative of the toxic potential of the facility's discharge.

Outfall 001: None
Outfall 003: None

The current permit includes both concentration and mass-based water quality based effluent limitations for total aluminum and total selenium at Outfall 001. These effluent limitations are the same as those calculated in Appendix B, and are continued in the draft permit. These effluent limitations, and additional effluent limitations for total aluminum at Outfall 001 are proposed in the draft permit as follows:

Outfall No.	Parameter	Daily Avg.	Daily Max.
001	Aluminum, total	Report mg/L	Report mg/L
		Report lbs/day	Report lbs/day
		1.4 mg/L *	2.9 mg/L *
		234 lbs/day *	484 lbs/day *
	Selenium, total	0.013 mg/L	0.027 mg/L
		2.17 lbs/day	4.51 lbs/day

* The permittee has been granted a temporary variance to the acute water quality based effluent limitations for total aluminum at Outfall 001. The effluent limitations listed are reflected in Other Requirements No. 13 of the draft permit, and will become effective should the USEPA does not approve the WER.

See Appendix B of this fact sheet for calculation of water quality-based effluent limitations for aquatic life protection. For more details on the calculation of water quality-based effluent limitations, see the TCEQ guidance document - "Implementation of the Texas Commission on Environmental Quality Standards Via Permitting" and EPA's "Technical Support Document For Water Quality-based Toxics Control".

3. AQUATIC ORGANISM TOXICITY CRITERIA (7-DAY CHRONIC)

a. SCREENING

Outfall 001

The existing permit includes chronic freshwater biomonitoring requirements at Outfall 001. A review of the whole effluent toxicity testing database for Outfall 001 indicates that, in the past five years, the permittee has performed thirty chronic tests, four of which demonstrated statistically significant toxicity: *Ceriodaphnia dubia*, 5/5/98, sublethality, NOEC<7%; *Ceriodaphnia dubia*, 7/13/99, sublethality, NOEC 7%; *Ceriodaphnia dubia*, 4,24,01, sulethality, NOEC <8%. However persistent significant lethality was never demonstrated. Analytical data submitted with the application does not indicate violation of any numerical water quality-based effluent limitation for aquatic life protection (considering the aluminum variance proposed for approval in this permit), therefore minimum chronic freshwater biomonitoring

b. PERMIT ACTION

24-hour 100% acute biomonitoring tests are required at Outfalls 001 and 003 at a frequency of once per six months for the life of the permit.

The biomonitoring procedures stipulated as a condition of this permit are as follows:

i) Acute 24-hour static toxicity test using the water flea (Daphnia pulex). A minimum of five (5) replicates with eight (8) organisms per replicate shall be used for this test.

ii) Acute 24-hour static toxicity test using the fathead minnow (Pimephales promelas). A minimum of five (5) replicates with eight (8) organisms per replicate shall be used for this test.

5. AQUATIC ORGANISM BIOACCUMULATION CRITERIA

a. SCREENING

Analytical data reported in the application for Outfalls 001 and 003 were screened against calculated water quality-based effluent limitations for the protection of human health (using consumption of freshwater fish tissue criteria found in Table 3 of the Texas Surface Water Quality Standards - 30 TAC Chapter 307). The discharges of metal cleaning wastes via internal Outfall 101 and treated domestic wastewater via Outfall 103 are not subject to screening against water quality-based effluent limitations.

Freshwater fish tissue bioaccumulation criteria are applied at the human health mixing zone. The human health mixing zone for discharges into lakes/reservoirs is defined as a 200 foot radius from the point where the discharge enters Welsh Reservoir.

Outfall 001

Self report data indicates the average of the daily average flow from Outfall 001 is 14.04 MGD. The following estimated effluent dilution is calculated at the human health mixing zone using the EPA horizontal jet plume model for discharges into lakes/reservoirs:

Outfall 001 human health mixing zone: 9%

Outfall 003

Self report data indicates the average of the daily average flow from Outfall 003 is 1,053.32 MGD. The following estimated effluent dilution is calculated at the human health mixing zone using the EPA horizontal jet plume model for discharges into lakes/reservoirs:

This permit may be reopened to require effluent limits, additional testing, and/or other appropriate actions to address toxicity if biomonitoring data show actual or potential ambient toxicity to be the result of the permittee's discharge to the receiving stream or water body.

c. DILUTION SERIES

The permit requires five (5) dilutions in addition to the control (0% effluent) to be used in the toxicity tests. These additional effluent concentrations shall be:

Outfall 001: 8%, 10%, 14%, 18%, and 24%. The low-flow effluent concentration (critical dilution) is defined as 18% effluent.

Outfall 003: 32%, 42%, 56%, 75%, and 100%. The low-flow effluent concentration (critical dilution) is defined as 100% effluent.

The dilution series outlined above was calculated using a 0.75 factor applied to the critical dilution. The critical dilution is the estimated effluent dilution at the edge of the aquatic life mixing zone which is calculated in section X.D.2.a. of this fact sheet.

4. AQUATIC ORGANISM TOXICITY CRITERIA (24 - HOUR ACUTE)

a. SCREENING

Outfall 001

The existing permit includes 24-hour acute freshwater biomonitoring language for Outfall 001. A review of the whole effluent toxicity testing database for Outfall 001 indicates that, in the past five years, the permittee has performed twenty-two 24-hour acute tests, with one demonstration of significant mortality; *Pimephales promelas*, 4/24/01. However, persistent significant lethality was never demonstrated. Minimum 24-hour acute freshwater biomonitoring requirements are proposed in the draft permit as outlined below

Outfall 003

The existing permit includes 24-hour acute freshwater biomonitoring language for Outfall 003. A review of the whole effluent toxicity testing database for Outfall 003 indicates that, in the past five years, the permittee has performed twenty 24-hour acute tests, with no demonstrations of significant mortality. Minimum 24-hour acute freshwater biomonitoring requirements are proposed in the draft permit as outlined below.

b. PERMIT ACTION

None.

XI. PRETREATMENT REQUIREMENTS

This facility is not defined as a publicly owned treatment works (POTW). Pretreatment requirements are not proposed in the draft permit.

XII. VARIANCE REQUESTS

The applicant has requested an extension of the previously authorized temporary variance to the existing water quality standards for the aluminum criterion for Big Cypress Creek Below Lake Bob Sandlin, in Segment No. 0404 of the Cypress Creek River Basin. The permittee has conducted a water study of Big Cypress Creek Below Lake Bob Sandlin, consisting of a water effects ratio (WER) and development of site specific criterion for aluminum, into which wastewaters via Outfalls 001 and 003 are discharged. The 2000 Texas Surface Water Quality Standards (30 TAC Chapter 307), adopted by the Commission on July 26, 2000, include provisions allowing the use of approved water quality effects ratios in calculating water quality based effluent limitations. The WER for aluminum for Big Cypress Creek Below Lake Bob Sandlin, in Segment No. 0404 of the Cypress Creek River Basin, and the 2000 Texas Surface Water Quality Standards have been submitted to the United States Environmental Protection Agency for approval. The permittee has requested an extension to the current temporary variance pending United States Environmental Protection Agency approval of the WER and 2000 Texas Surface Water Quality Standards.

XIII. PROCEDURES FOR FINAL DECISION

When an application is declared administratively complete, the Chief Clerk sends a letter to the applicant advising the applicant to publish the Notice of Receipt of Application and Intent to Obtain Permit in the newspaper. In addition, the Chief Clerk instructs the applicant to place a copy of the application in a public place for review and copying in the county where the facility is or will be located. This application will be in a public place throughout the comment period. The Chief Clerk also mails this notice to any interested persons and, if required, to landowners identified in the permit application. This notice informs the public about the application, and provides that an interested person may file comments on the application or request a contested case hearing or a public meeting.

Once a draft permit is completed, it is sent, along with the Executive Director's preliminary decision, as contained in the technical summary or fact sheet, to the Chief Clerk. At that time, Notice of Application and Preliminary Decision will be mailed to the same people and published in the same newspaper as the prior notice. This notice sets a deadline for making public comments. The applicant must place a copy of the Executive Director's preliminary decision and draft permit in the public place with the application. This notice sets a deadline for public comment.

Any interested person may request a public meeting on the application until the deadline for filing public comments. A public meeting is intended for the taking of public comment, and is not a contested case proceeding.

After the public comment deadline, the Executive Director prepares a response to all significant public comments on the application or the draft permit raised during the public comment period. The Chief Clerk

Outfall 003 human health mixing zone: 100%

Water quality-based effluent limitations for the protection of human health with consideration for consumption of freshwater fish tissue are calculated using the same procedure as outlined for calculation of water quality-based effluent limitations for aquatic life protection in section X.D.2.a. of this fact sheet. A 99th percentile confidence level in the long term average calculation is used with only one long term average value being calculated.

Significant potential is again determined by comparing reported analytical data against 70% and 85% of the calculated daily average water quality-based effluent limitation.

b. PERMIT ACTION

Reported analytical data for the following parameters exceeded 85% of the calculated daily average water quality-based effluent limitation for human health protection (using consumption of freshwater fish tissue criteria):

Outfall 001: None.
Outfall 003: None.

Reported analytical data for the following parameters exceeded 70% of the calculated daily average water quality-based effluent limitation for human health protection (using consumption of freshwater fish tissue criteria), but was less than 85% of the calculated daily average water quality-based effluent limitation for human health protection (using consumption of freshwater fish tissue criteria):

Outfall 001: None.
Outfall 003: None.

See Appendix B of this fact sheet for calculation of water quality-based effluent limitations for human health protection. For more details on the calculation of water quality-based effluent limitations, see the TCEQ guidance document - "Implementation of the Texas Commission on Environmental Quality Standards Via Permitting" and EPA's "Technical Support Document For Water Quality-based Toxics Control."

6. DRINKING WATER SUPPLY PROTECTION

a. SCREENING

Water quality Segment No. 0404 which receives the discharge(s) from this facility is not designated as a public water supply. Screening reported analytical data for Outfalls 001 and 003 against water quality-based effluent limitations calculated for the protection of a drinking water supply is not applicable.

TCEQ Interoffice Memorandum from Michael B. Pfeil, Water Quality Assessment Team to Industrial Permits Team dated January 3, 2003.

TCEQ Interoffice Memorandum from Charles Marshall, Water Quality Assessment Team to Industrial Permits Team dated January 3, 2003.

TCEQ Interoffice Memorandum from Nancy Vignali, Water Quality Assessment Team to Industrial Permits Team dated December 20, 2002.

TCEQ Interoffice Memorandum from Debbi Miller, Water Quality Standards Team to Industrial Permits Team dated December 13, 2002.

Letter from Franklin Mills, American Electric Power to Laurie Lancaster, TCEQ dated December 9, 2002.

Letter from Laurie Lancaster, TCEQ to Franklin Mills, American Electric Power dated November 18, 2002.

Letter from Laurie Lancaster, TCEQ to Franklin Mills, American Electric Power dated September 27, 2002.

E. MISCELLANEOUS

Quality Criteria for Water (1986), EPA 440/5-86-001, 5/1/86.

The State of Texas Water Quality Inventory, 13th Edition, Publication No. SFR-50, Texas Commission on Environmental Quality, December 1996.

Texas Surface Water Quality Standards, 30 TAC Sections 307.1 - 307.10 (21 TexReg 9765, 4/30/97).

"Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, Fourth Edition," EPA/600/4-90/027F.

"Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Third Edition," EPA-600-4-91-002.

"Implementation of the Texas Commission on Environmental Quality Standards via Permitting," Texas Commission on Environmental Quality, August 1995.

"TCEQ Guidance Document for Establishing Monitoring Frequencies for Domestic and Industrial Wastewater Discharge Permits," TCEQ Document No. 98-001.000-OWR-WQ, May 1998.

then mails the Executive Director's Response to Comments and Final Decision to people who have filed comments, requested a contested case hearing, or requested to be on the mailing list. This notice provides that if a person is not satisfied with the Executive Director's response and decision, they can request a contested case hearing or file a request to reconsider the Executive Director's decision within 30 days after the notice is mailed.

The Executive Director will issue the permit unless a written hearing request or request for reconsideration is filed within 30 days after the Executive Director's Response to Comments and Final Decision is mailed. If a hearing request or request for reconsideration is filed, the Executive Director will not issue the permit and will forward the application and request to the TCEQ Commissioners for their consideration at a scheduled Commission meeting. If a contested case hearing is held, it will be a legal proceeding similar to a civil trial in state district court.

If the Executive Director calls a public meeting or the Commission grants a contested case hearing as described above, the Commission will give notice of the date, time, and place of the meeting or hearing. If a hearing request or request for reconsideration is made, the Commission will consider all public comments in making its decision and shall either adopt the Executive Director's response to public comments or prepare its own response.

XIV. ADMINISTRATIVE RECORD

The following section is a list of the fact sheet citations to applicable statutory or regulatory provisions and appropriate supporting references.

A. PERMIT

TPDES Permit No. 01811 issued on May 18, 2001.

B. APPLICATION

TCEQ wastewater permit application received September 19, 2002.

C. 40 CFR CITATIONS

40 CFR Part 122 40 CFR Part 423

D. LETTERS/MEMORANDA/RECORDS OF COMMUNICATION

Letter from Kimberly Wilson, TCEQ to Franklin Mills, American Electric Power dated April 24, 2003.

Letter from Franklin Mills, American Electric Power to Kimberly Wilson, TCEQ dated April 22, 2003.

TCEQ Interoffice Memorandum from Michael B. Pfeil, Water Quality Assessment Team to Industrial Permits Team dated January 30, 2003.

TCEQ Interoffice Memorandum from Michael B. Pfeil, Water Quality Assessment Team to Industrial Permits Team dated January 24, 2003.

Parameter	Daily Average	Daily Maximum
Total Suspended Solids	30 mg/L	100 mg/L
	5,007 lbs/day	16,690 lbs/day
Oil and Grease	15 mg/L	20 mg/L
	2,504 lbs/day	3,338 lbs/day
pH	Between 6.0 and 9.0 standard units.	

Outfall 101

The discharge at Outfall 101 consists of metal cleaning wastes. The discharge of metal cleaning wastes is subject to categorical guidelines in 40 CFR Part 423 (Steam Electric Power Generating Point Source Category).

Technology-based effluent limitations are as follows:

BPT (40 CFR §423.12)

Parameter	Daily Average	Daily Maximum
Total Suspended Solids	30 mg/L	100 mg/L
Oil and Grease	15 mg/L	20 mg/L
Copper, Total	1.0 mg/L	1.0 mg/L
Iron, Total	1.0 mg/L	1.0 mg/L
pH	Between 6.0 and 9.0 standard units	

BAT (40 CFR §423.13)

Parameter	Daily Average	Daily Maximum
Copper, Total	1.0 mg/L	1.0 mg/L
Iron, Total	1.0 mg/L	1.0 mg/L

Because this is an intermittent and flow variable discharge, mass-based effluent limitations are not included in the draft permit.

Effluent limitations for total suspended solids, oil and grease, and pH are established at external Outfall 001; and, therefore, are not established at Outfall 101. Additionally, this is an internal outfall and water quality based effluent limitations for total copper are not applicable.

Effluent limitations established for total copper in the existing permit and in 30 TAC 319 are at 0.5 mg/L daily average, and are more stringent than those discussed above. The more stringent 0.5 mg/L daily average effluent limitation is included in the draft permit.

The technology-based effluent limitations outlined above are equal to those included in the current permit, and are continued in the draft permit as follows:

Parameter	Daily Average	Daily Maximum
Copper, Total	0.5 mg/L	1.0 mg/L
Iron, Total	1.0 mg/L	1.0 mg/L

APPENDIX A
CALCULATED TECHNOLOGY-BASED EFFLUENT LIMITATIONS

Outfall 001

The discharge at Outfall 001 consists of low volume wastes, ash transport water, coal pile runoff, storm water, and previously monitored effluents. Previously monitored effluents consist of metal cleaning wastes monitored at internal Outfall 101. Technology-based effluent limitations for the discharges of low volume wastes and ash transport water are applied at Outfall 001. Technology-based effluent limitations for the discharges of metal cleaning wastes are applied at Outfall 101.

The discharges of low volume waste, ash transport water, and coal pile runoff are subject to categorical guidelines in 40 CFR Part 423 (Steam Electric Power Generating Point Source Category).

Technology-based effluent limitations applicable to low volume wastes and ash transport water are listed as follows:

BPT (40 CFR §423.12)

Parameter	Daily Average	Daily Maximum
Total Suspended Solids	30 mg/L	100 mg/L
Oil and Grease	15 mg/L	20 mg/L
pH	Between 6.0 and 9.0 standard units	

Technology-based effluent limitations applicable to coal pile runoff water are listed as follows:

BPT (40 CFR §423.12)

Parameter	Daily Average	Daily Maximum
Total Suspended Solids	N/A	50 mg/L
pH	Between 6.0 and 9.0 standard units	

Because coal pile runoff is an intermittent and variable component of the discharge at Outfall 001, total suspended solids effluent limitations have been established at 30 mg/L daily average and 100 mg/L daily maximum, in accordance with 40 CFR 423 for the continuous discharges of low volume wastes and ash transport water.

Mass based effluent limitations were calculated in the following way:

Total Suspended Solids
Daily Average = (30 mg/L) * (8.345) * (20 MGD) = 5,007 lbs/day
Daily Maximum - (100 mg/L) * (8.345) * (20 MGD) = 16,690 lbs/day

The concentration limitation is multiplied by a conversion factor, then by the permitted flow. Although the total permitted flow includes contributions from Outfall 101, technology based effluent limitations were assumed, per best professional judgment, at the concentrations listed above.

The technology-based effluent limitations outlined above are equal to those included in the current permit, and are continued in the draft permit as follows:

Parameter	Daily Average	Daily Maximum
Free Available Chlorine	0.2 mg/L	0.5 mg/L
	198 lbs/day	495 lbs/day
Total Residual Chlorine	N/A	0.2 mg/L
	N/A	198 lbs/day
Temperature (°F)	Report	Report

Outfall 103

The discharge at Outfall 103 consists of treated domestic wastewater. The discharge of treated domestic wastewater is not subject to categorical guidelines in 40 CFR Part 423 (Steam Electric Power Generating Point Source Category), but is subject to effluent limitations in 30 Texas Administrative Code Chapter 309.

Technology-based effluent limitations are listed as follows:

30 TAC 309

Parameter	Daily Average	Daily Maximum
Total Suspended Solids	20 mg/L	45 mg/L
Biochemical Oxygen Demand (5-day)	20 mg/L	45 mg/L
Total Residual Chlorine	1.0 mg/L (min)	4.0 mg/L (max)
pH	Between 6.0 and 9.0 standard units	

The technology-based effluent limitations outlined above are equal to those included in the current permit (listed as Outfall 002), and are continued in the draft permit as follows:

Parameter	Daily Average	Daily Maximum
Total Suspended Solids	20 mg/L	45 mg/L
	1.0 lbs/day	2.3 lbs/day
Biochemical Oxygen Demand (5-day)	20 mg/L	45 mg/L
	1.0 lbs/day	2.3 lbs/day
Total Residual Chlorine	1.0 mg/L (min)	4.0 mg/L (max)
pH	Between 6.0 and 9.0 standard units	

OTHER REQUIREMENTS

Definitions for total residual chlorine, ash transport water, low volume wastes, metal cleaning wastes, chemical metal cleaning wastes, and coal pile runoff are included in the draft permit as defined by 40 CFR 423.11.

An "Other Requirement" prohibiting the discharge of polychlorinated biphenyl compounds is included in the permit as required by 40 CFR 423.12(b)(2) and 423.13(a).

An "Other Requirement" prohibiting the discharged from any single generating unit for more than two hours per day (unless the discharger demonstrates to the TCEQ that discharge for more than two hours is required for macroinvertebrate control) is included in the permit as required by 40 CFR 423.12(b)(8) and 423.13(d)(2).

Outfall 003

The discharge at Outfall 003 consists of once-through cooling water and previously monitored effluent. Previously monitored effluent consists of treated domestic wastewater permitted at internal Outfall 103. Technology-based effluent limitations for are applied to the discharge of treated domestic wastewater at Outfall 103.

The discharge of once-through cooling water is subject to categorical guidelines in 40 CFR Part 423 (Steam Electric Power Generating Point Source Category). Because the discharge of once-through cooling water comprises over 99% of the discharge at Outfall 003, effluent limitations applicable to once-through cooling water are applied to the outfall as a whole.

Technology-based effluent limitations are listed as follows:

BPT (40 CFR §423.12)

Parameter	Daily Average	Daily Maximum
Free Available Chlorine	0.2 mg/L	0.5 mg/L

BAT (40 CFR §423.13)

Parameter	Daily Average	Daily Maximum
Total Residual Chlorine	N/A	0.2 mg/L

* Free available nor total residual chlorine may not be discharged from any single generating unit for more than two hours per day.

Mass based effluent limitations were calculated in the following way:

Free Available Chlorine
Daily Average = (0.2 mg/L) * (8.345) * (1,425 MGD) / 12
Daily Maximum - (0.5 mg/L) * (8.345) * (1,425 MGD) / 12

Total Residual Chlorine
Daily Maximum = (0.2 mg/L) * (8.345) *(1,425 MGD) / 12

The concentration limitation is multiplied by a conversion factor, then by the flow. The result is divided by twelve due to limitations on the period of time and number of operating units.

Monitoring Requirements are established for temperature based on best professional judgement.

The current permit includes a daily maximum effluent limitation for free available chlorine at 0.2 mg/L. As part of this permit application, the permittee has requested to amend the current permit and establish a daily maximum limitation for free available chlorine at 0.5 mg/L. This amendment has been recommended for approval. With the exception of the concentration based daily maximum effluent limitation for free available chlorine; the technology-based effluent limitations outlined above are equal to those included in the current permit, and are continued in the draft permit as follows:

Parameter	Daily Average	Daily Maximum
Free Available Chlorine	0.2 mg/L	0.5 mg/L
	198 lbs/day	495 lbs/day
Total Residual Chlorine	N/A	0.2 mg/L
	N/A	198 lbs/day
Temperature (°F)	Report	Report

Outfall 103

The discharge at Outfall 103 consists of treated domestic wastewater. The discharge of treated domestic wastewater is not subject to categorical guidelines in 40 CFR Part 423 (Steam Electric Power Generating Point Source Category), but is subject to effluent limitations in 30 Texas Administrative Code Chapter 309.

Technology-based effluent limitations are listed as follows:

30 TAC 309

Parameter	Daily Average	Daily Maximum
Total Suspended Solids	20 mg/L	45 mg/L
Biochemical Oxygen Demand (5-day)	20 mg/L	45 mg/L
Total Residual Chlorine	1.0 mg/L (min)	4.0 mg/L (max)
pH	Between 6.0 and 9.0 standard units	

The technology-based effluent limitations outlined above are equal to those included in the current permit (listed as Outfall 002), and are continued in the draft permit as follows:

Parameter	Daily Average	Daily Maximum
Total Suspended Solids	20 mg/L	45 mg/L
	1.0 lbs/day	2.3 lbs/day
Biochemical Oxygen Demand (5-day)	20 mg/L	45 mg/L
	1.0 lbs/day	2.3 lbs/day
Total Residual Chlorine	1.0 mg/L (min)	4.0 mg/L (max)
pH	Between 6.0 and 9.0 standard units	

OTHER REQUIREMENTS

Definitions for total residual chlorine, ash transport water, low volume wastes, metal cleaning wastes, chemical metal cleaning wastes, and coal pile runoff are included in the draft permit as defined by 40 CFR 423.11.

An "Other Requirement" prohibiting the discharge of polychlorinated biphenyl compounds is included in the permit as required by 40 CFR 423.12(b)(2) and 423.13(a).

An "Other Requirement" prohibiting the discharged from any single generating unit for more than two hours per day (unless the discharger demonstrates to the TCEQ that discharge for more than two hours is required for macroinvertebrate control) is included in the permit as required by 40 CFR 423.12(b)(8) and 423.13(d)(2).

APPENDIX B
CALCULATED WATER QUALITY-BASED EFFLUENT LIMITATIONS

A site specific partitioning coefficient for total aluminum, 0.46, was approved for use at Outfalls 001 and 003 in Interoffice Memorandum from Sidne Tiemann of the Water Quality Standards Team to the Industrial Team dated November 27, 1999 and electronic mail from Debbie Miller to Kimberly Wilson dated February 18, 2003. Effluent limitations for total aluminum at Outfalls 001 and 003 are calculated using the methodology outlined in "Procedures to Implement The Texas Water Surface Water Quality Standards" (January 2003).

Effluent limitations are calculated for total aluminum using the following formula:

WLA = (acute standard) / (partitioning coefficient) * (fraction of effluent at ZID)
LTA = 0.32 (99% probability) * (WLA)
Daily Average = 1.47 (99% probability) * (LTA)
Daily Maximum = 3.11 (99% probability) * (LTA)

Using the formula above, the following effluent limitations are calculated at Outfalls 001 and 003:

Outfall	Daily Average	Daily Maximum
001	1.42 mg/L	3.01 mg/L
003	1.01 mg/L	2.14 mg/L

Results of analysis submitted with the application for total aluminum at Outfall 001 exceed 85% of the calculated water quality based effluent limitation, as calculated above. However, the current and draft permits include a temporary variance to the total aluminum criteria at Outfall 001. The temporary variance does include alternate effluent limitations for total aluminum, which are more stringent than those calculated above. These alternate effluent limitations are continued in Other Requirements No. 13 of the draft permit, and will become applicable to the discharge at Outfall 001 should the USEPA not approve the WER. Alternate effluent limitations for total aluminum at Outfall 001 are continued from the existing permit.

Results of analysis indicate levels of total aluminum at Outfall 003 at less than 70% of the calculated water quality based effluent limitation, as listed above. Therefore, effluent limitations for total aluminum are not proposed at Outfall 003.

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

TEXTOX MENU # 4 30 TAC 307 (7/13/95)

THE RECEIVING STREAM IS A LAKE OR RESERVOIR.

INPUT

Prepared By:	Kimberly Wilson
Permittee:	Southwestern Electrc
Permit No.:	1811
Outfall No.:	1
Receiving Stream:	Welsh Reservoir
Segment No.:	404
Segment Name:	Big Cypress Creek
TSS:	7.0
pH:	6.4
Hardness:	38.0
Chloride:	32.0
Critical Low Flow [7Q2] (cfs)	N/A
Harmonic Mean Flow (cfs)	N/A
Effluent Flow for Aquatic Life (MGD)	15.860
Percent Effluent for Human Health:	9.0
Percent Effluent for ZID:	71.0
Percent Effluent for Mixing Zone:	18.0
Fish Only (1) or Water & Fish (2) Option:	1

CALCULATE TOTAL/DISSOLVED RATI(

LAKE METAL	*Kpo*	*a*	*Ct/Cd*	*Fraction Dissolved*	
Aluminum	N/A	N/A	1.00	1.00	Assumed
Arsenic	0.48	-0.73	1.81	0.55	
Cadmium	3.52	-0.92	5.11	0.20	
Chromium (Total)	2.17	-0.27	9.98	0.10	
Chromium (3+)	2.17	-0.27	9.98	0.10	
Chromium (6+)	N/A	N/A	1.00	1.00	Assumed
Copper	2.85	-0.9	4.46	0.22	
Lead	2.04	-0.53	6.09	0.16	
Mercury	N/A	N/A	1.00	1.00	
Nickel	2.21	-0.76	4.53	0.22	
Selenium	N/A	N/A	1.00	1.00	Assumed
Silver	2.4	-1.03	3.26	0.102	f(Cl)
Zinc	3.34	-0.68	7.23	0.14	

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

AQUATIC LIFE
CALCULATE DAILY AVERAGE AND DAILY MAXIMUM PERMIT LIMITS

CONSTITUENT	*ACUTE STANDARD (ug/L)*	*CHRONIC STANDARD (ug/L)*	*WLAa*	*WLAc*	*LTAa*	*LTAc*	*DLY AVG (ug/l)*	*DLY MAX (ug/l)*	*MAL (ug/l)*
Aldrin	3	1E+183	4.23	*********	1.352	*********	1.988	4.205	0.05
Aluminum	991	1E+183	1396	*********	446.6	*********	656.6	1389.1	30
Arsenic	360	190	919	1912	294	1167	432	914	10
Cadmium	11.31	0.53	81.5	15.07	26.07	9.2	13.51	28.59	1
Carbaryl	2	1E+183	2.817	*********	0.901	*********	1.325	2.803	5
Chlordane	2.4	0.0043	3.380	0.024	1.082	0.01	0.021	0.045	0.15
Chlorpyrifos	0.083	0.041	0.117	0.228	0.037	0.14	0.055	0.116	0.05
Chromium (3+)	786	94	11053	5197	3537	3170	4660	9859	***
Chromium (6+)	16	11	22.54	61.11	7.21	37.3	10.60	22.43	10
Copper	7.71	5.60	48.48	138.76	15.51	84.64	22.80	48.24	10
Cyanide	45.78	10.69	64.48	59.39	20.63	36.23	30.33	64.17	20
4,4'-DDT	1.1	0.001	1.549	0.006	0.496	0.003	0.005	0.011	0.1
Demeton	1E+183	0.1	*********	0.556	*********	0.339	0.498	1.054	0.2
Dicofol	59.3	19.8	83.5	110.0	26.7	67.1	39.3	83.1	20
Dieldrin	2.5	0.0019	3.521	0.011	1.127	0.006	0.009	0.020	0.1
Diuron	210	70	296	389	95	237	139	294	***
Endosulfan	0.22	0.056	0.310	0.311	0.099	0.190	0.146	0.308	0.1
Endrin	0.18	0.0023	0.254	0.013	0.081	0.008	0.011	0.024	0.1
Guthion	1E+183	0.01	*********	0.056	*********	0.034	0.050	0.105	0.1
Heptachlor	0.52	0.0038	0.732	0.021	0.234	0.013	0.019	0.040	0.05
Hexachlorocyclohexane	2	0.08	2.817	0.444	0.901	0.271	0.399	0.843	0.05
Lead	23.82	0.93	204.38	31.42	65.40	19.16	28.17	59.60	5
Malathion	1E+183	0.01	*********	0.056	*********	0.034	0.050	0.105	0.1
Mercury	2.4	1.3	3.380	7.222	1.082	4.406	1.590	3.364	0.2
Methoxychlor	1E+183	0.03	*********	0.167	*********	0.102	0.149	0.316	2
Mirex	1E+183	0.001	*********	0.006	*********	0.003	0.005	0.011	0.2
Nickel	626	70	3987	1748	1276	1066	1568	3317	10
PCBs (Total)	2	0.014	2.817	0.078	0.901	0.047	0.070	0.148	1
Parathion	0.065	0.013	0.092	0.072	0.029	0.044	0.043	0.091	0.1
Phenanthrene	30	30	42.3	166.7	13.5	101.7	19.9	42.1	10
Pentachlorophenol	4.96	3.13	6.99	17.41	2.24	10.62	3.29	6.96	50
Selenium	20	5	28.2	27.778	9.01	16.94	13.25	28.03	10
Silver	0.92	*********	12.66	*********	4.052	*********	5.957	12.603	2
Toxaphene	0.78	0.0002	1.099	0.0011	0.352	0.0007	0.0010	0.0021	5
Tributyltin	0.13	0.024	0.183	0.133	0.059	0.081	0.086	0.182	0.01
2,4,5-Trichlorophenol	136	64	192	356	61	217	90	191	50
Zinc	52	47	525	1874	168	1143	247	522	5

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

HUMAN HEALTH
CALCULATE DAILY AVERAGE AND DAILY MAXIMUM PERMIT LIMITS

CONSTITUENT	Fish Only (ug/l)	Water and Fish (ug/l)	WLAh	LTAh	DLY AVG (ug/l)	DLY MAX (ug/l)	MAL (ug/l)
Aldrin	0.0327	0.0312	0.363	0.338	0.497	1.051	0.05
Alpha Hexachlorocyclohexane	0.997	0.645	11.078	10.302	15.144	32.040	0.05
Arsenic	*********	50	0	0	0	0	10
Barium	*********	2000	0	0	0	0	10
Benzene	312	5	3466.67	3224.00	4739.28	10026.64	10
Benzidine	0.0035	0.0011	0.039	0.036	0.053	0.112	50
Benzo(a)anthracene	0.0265	0.0261	0.294	0.274	0.403	0.852	10
Benzo(a)pyrene	0.0265	0.0261	0.294	0.274	0.403	0.852	10
Beta Hexachlorocyclohexane	3.49	2.26	38.778	36.063	53.013	112.157	0.05
Bis(chloromethyl)ether	1.59	0.0207	17.667	16.430	24.152	51.097	***
Cadmium	*********	5	0.00	0.00	0.00	0.00	1
Carbon Tetrachloride	182	5	2022.22	1880.67	2764.58	5848.87	10
Chlordane	0.0213	0.021	0.237	0.220	0.324	0.685	0.15
Chlorobenzene	4947	1305	54967	51119	75145	158980	10
Chloroform	12130	*********	134778	125343	184255	389818	10
Chromium	*********	100	0	0	0	0	10
Chrysene	0.0265	0.0261	0.294	0.274	0.403	0.852	10
Cresols	46667	4049	518522	482226	708872	1499722	10
Cyanide (Free)	*********	200	0	0	0	0	20
4,4'-DDD	0.299	0.297	3.322	3.090	4.542	9.609	0.1
4,4'-DDE	0.0545	0.0544	0.606	0.563	0.828	1.751	0.1
4,4'-DDT	0.0528	0.0527	0.587	0.546	0.802	1.697	0.1
2,4-D	*********	70	0	0	0	0	10
Danitol	0.721	0.709	8.011	7.450	10.952	23.171	***
Dibromochloromethane	15354	100	170600	158658	233227	493426	10
1,2-Dibromoethane	1.15	0.0518	12.778	11.883	17.469	36.957	2
Dieldrin	0.0012	0.0012	0.013	0.012	0.018	0.039	0.1
p-Dichlorobenzene	*********	75	0	0	0	0	10
1,2-Dichloroethane	1794	5	19933.33	18538.00	27250.86	57653.18	10
1,1-Dichloroethylene	87.4	7	971.11	903.13	1327.61	2808.74	10
Dicofol	0.217	0.215	2.411	2.242	3.296	6.974	20
Dioxins/Furans	1.00E-06	1.00E-06	1.11E-05	1.03E-05	1.11E-05	3.21E-05	10
Endrin	*********	2	0.0	0.0	0.0	0.0	0.1
Flouride	*********	4000	0	0	0	0	500
Gamma Hexachlorocyclohexane	16	0.2	177.778	165.333	243.040	514.187	0.05
Heptachlor	0.0181	0.0177	0.201	0.187	0.275	0.582	0.05
Heptachlor Epoxide	7.39	0.2	82.111	76.363	112.254	237.490	1
Hexachlorobenzene	0.0129	0.0129	0.143	0.133	0.196	0.415	10
Hexachlorobutadiene	11.2	9.34	124.44	115.73	170.13	359.93	10
Hexachloroethane	94.1	84.4	1045.6	972.4	1429.4	3024.1	20
Hexachlorophene	0.0532	0.0531	0.591	0.550	0.808	1.710	10
Lead	25	5	1692.0	1573.6	2313.2	4893.8	5
Mercury	0.0122	0.0122	0.136	0.126	0.185	0.392	0.2
Methoxychlor	*********	40	0	0	0	0	2
Methyl Ethyl Ketone	886667	4411	9851856	9162226	13468472	28494522	50
Mirex	0.0189	0.0171	0.210	0.195	0.287	0.607	0.2
Nitrate-Nitrogen	*********	10000	0	0	0	0	1000
Nitrobenzene	721	41.8	8011.1	7450.3	10952.0	23170.5	10
N-Nitrsodiethylamine	7.68	0.0382	85.333	79.360	116.659	246.810	20
N-Nitroso-di-n-Butylamine	13.5	1.84	150.000	139.500	205.065	433.845	20
PCB's	0.0013	0.0013	0.014	0.013	0.020	0.042	1
Pentachlorobenzene	1.11	1.09	12.333	11.470	16.861	35.672	20
Pentachlorophenol	136	129	1511.1	1405.3	2065.8	4370.6	50
Pyridine	13333	88.1	148144.4	137774.3	202528.3	428478.2	20
Selenium	*********	50	0.0	0.0	0.0	0.0	10
1,2,4,5-Tetrachlorobenzene	1.52	1.43	16.889	15.707	23.089	48.848	20
Tetrachloroethylene	1832	5	20355.56	18930.67	27828.08	58874.37	10
Toxaphene	0.0445	0.044	0.494	0.460	0.676	1.430	5
2,4,5-TP (Silvex)	*********	50	0.0	0.0	0.0	0.0	2
2,4,5-Trichlorophenol	4021	2767	44678	41550	61079	129222	50
Trichloroethylene	*********	5	0.00	0.00	0.00	0.00	10
1,1,1-Trichloroethane	*********	200	0	0	0	0	10
TTHMs	*********	100	0	0	0	0	10
Vinyl Chloride	94.5	2	1050.00	976.50	1435.46	3036.92	10

CALCULATE 70% AND 85% OF DAILY AVERAGE PERMIT LIMITS

AQUATIC LIFE	*70%*	*85%*
Aldrin	1.39	1.69
Aluminum	460	558
Arsenic	302	367
Cadmium	9.46	11.49
Carbaryl	0.93	1.13
Chlordane	0.015	0.018
Chlorpyrifos	0.038	0.047
Chromium (3+)	3262	3961
Chromium (6+)	7.42	9.01
Copper	15.96	19.38
Cyanide	21.23	25.78
4,4'-DDT	0.003	0.004
Demeton	0.349	0.423
Dieldrin	0.007	0.008
Diuron	97.39	118.26
Endosulfan	0.102	0.124
Endrin	0.008	0.010
Guthion	0.035	0.042
Heptachlor	0.013	0.016
Hexachlorocyclohexane	0.28	0.34
Lead	20	24
Malathion	0.035	0.042
Mercury	1.11	1.35
Methoxychlor	0.10	0.13
Mirex	0.003	0.004
Nickel	1097	1333
PCBs (Total)	0.049	0.059
Parathion	0.030	0.037
Phenanthrene	13.91	16.89
Pentachlorophenol	2.30	2.79
Selenium	9.28	11.26
Silver	4.17	5.06
Toxaphene	0.001	0.001
Tributyltin	0.060	0.073
2,4,5-Trichlorophenol	63.07	76.59
Zinc	173	210

HUMAN HEALTH		
Aldrin	0.348	0.422
Alpha Hexachlorocyclohexane	10.60	12.87
Arsenic	0.00	0.00
Barium	0	0
Benzene	3317.50	4028.39
Benzidine	0.037	0.045
Benzo(a)anthracene	0.282	0.342
Benzo(a)pyrene	0.282	0.342
Beta Hexachlorocyclohexane	37.11	45.06
Bis(chloromethyl)ether	16.91	20.53
Cadmium	0.00	0.00
Carbon Tetrachloride	1935.21	2349.89
Chlordane	0.226	0.275
Chlorobenzene	52601	63873
Chloroform	128978.29	156616.50
Chromium	0	0
Chrysene	0.282	0.342
Cresols	496210	602541
Cyanide (Free)	0.00	0.00
4,4'-DDD	3.18	3.86
4,4'-DDE	0.58	0.70
4,4'-DDT	0.56	0.68
2,4-D	0.00	0.00
Danitol	7.67	9.31
Dibromochloromethane	163259.08	198243.17
1,2-Dibromoethane	12.23	14.85
Dieldrin	0.013	0.015
p-Dichlorobenzene	0.00	0.00
1,2-Dichloroethane	19075.60	23163.23
1,1-Dichloroethylene	929.32	1128.47
Dicofol	2.31	2.80
Dioxins/Furans	7.78E-06	9.44E-06
Endrin	0.00	0.00
Flouride	0	0
Gamma Hexachlorocyclohexane	170.13	206.58
Heptachlor	0.192	0.234
Heptachlor Epoxide	78.58	95.42
Hexachlorobenzene	0.14	0.17
Hexachlorobutadiene	119.09	144.61
Hexachloroethane	1000.57	1214.97
Hexachlorophene	0.57	0.69
Lead	1619.21	1966.19
Mercury	0.130	0.158
Methoxychlor	0.00	0.00
Methyl Ethyl Ketone	9427930	11448201
Mirex	0.20	0.24
Nitrate-Nitrogen	0	0
Nitrobenzene	7666.39	9309.19
N-Nitrsodiethylamine	81.66	99.16
N-Nitroso-di-n-Butylamine	143.55	174.31
PCB's	0.014	0.017
Pentachlorobenzene	11.80	14.33
Pentachlorophenol	1446.09	1755.96
Pyridine	141769.79	172149.03
Selenium	0.00	0.00
1,2,4,5-Tetrachlorobenzene	16.16	19.63
Tetrachloroethylene	19479.66	23653.87
Toxaphene	0.47	0.57
2,4,5-TP (Silvex)	0.00	0.00
2,4,5-Trichlorophenol	42755	51917
Trichloroethylene	0.00	0.00
1,1,1-Trichloroethane	0.00	0.00
TTHMs	0.00	0.00
Vinyl Chloride	1004.82	1220.14

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

TEXTOX MENU # 4 30 TAC 307 (7/13/95)

THE RECEIVING STREAM IS A LAKE OR RESERVOIR.

INPUT

Prepared By:	Kimberly Wilson
Permittee:	Southwestern Electrc
Permit No.:	1811
Outfall No.:	3
Receiving Stream:	Welsh Reservoir
Segment No.:	404
Segment Name:	Big Cypress Creek
TSS:	7.0
pH:	6.4
Hardness:	38.0
Chloride:	32.0
Critical Low Flow [7Q2] (cfs)	N/A
Harmonic Mean Flow (cfs)	N/A
Effluent Flow for Aquatic Life (MGD)	1218.240
Percent Effluent for Human Health:	100.0
Percent Effluent for ZID:	100.0
Percent Effluent for Mixing Zone:	100.0
Fish Only (1) or Water & Fish (2) Option:	1

CALCULATE TOTAL/DISSOLVED RATIC

LAKE METAL	*Kpo*	*a*	*Ct/Cd*	*Fraction Dissolved*	
Aluminum	N/A	N/A	1.00	1.00	Assumed
Arsenic	0.48	-0.73	1.81	0.55	
Cadmium	3.52	-0.92	5.11	0.20	
Chromium (Total)	2.17	-0.27	9.98	0.10	
Chromium (3+)	2.17	-0.27	9.98	0.10	
Chromium (6+)	N/A	N/A	1.00	1.00	Assumed
Copper	2.85	-0.9	4.46	0.22	
Lead	2.04	-0.53	6.09	0.16	
Mercury	N/A	N/A	1.00	1.00	
Nickel	2.21	-0.76	4.53	0.22	
Selenium	N/A	N/A	1.00	1.00	Assumed
Silver	2.4	-1.03	3.26	0.102	f(Cl)
Zinc	3.34	-0.68	7.23	0.14	

AQUATIC LIFE
CALCULATE DAILY AVERAGE AND DAILY MAXIMUM PERMIT LIMITS

CONSTITUENT	*ACUTE STANDARD (ug/L)*	*CHRONIC STANDARD (ug/L)*	*WLAa*	*WLAc*	*LTAa*	*LTAc*	*DLY AVG (ug/l)*	*DLY MAX (ug/l)*	*MAL (ug/l)*
Aldrin	3	1E+183	3.00	*********	0.960	*********	1.411	2.986	0.05
Aluminum	991	1E+183	991	*********	317.1	*********	466.2	986.2	30
Arsenic	360	190	652	344	209	210	307	649	10
Cadmium	11.31	0.53	57.8	2.71	18.51	1.7	2.43	5.15	1
Carbaryl	2	1E+183	2.000	*********	0.640	*********	0.941	1.990	5
Chlordane	2.4	0.0043	2.400	0.004	0.768	0.00	0.004	0.008	0.15
Chlorpyrifos	0.083	0.041	0.083	0.041	0.027	0.03	0.037	0.078	0.05
Chromium (3+)	786	94	7848	935	2511	571	839	1775	***
Chromium (6+)	16	11	16.00	11.00	5.12	6.7	7.53	15.92	10
Copper	7.71	5.60	34.42	24.98	11.01	15.24	16.19	34.25	10
Cyanide	45.78	10.69	45.78	10.69	14.65	6.52	9.59	20.28	20
4,4'-DDT	1.1	0.001	1.100	0.001	0.352	0.001	0.001	0.002	0.1
Demeton	1E+183	0.1	*********	0.100	*********	0.061	0.090	0.190	0.2
Dicofol	59.3	19.8	59.3	19.8	19.0	12.1	17.8	37.6	20
Dieldrin	2.5	0.0019	2.500	0.002	0.800	0.001	0.002	0.004	0.1
Diuron	210	70	210	70	67	43	63	133	***
Endosulfan	0.22	0.056	0.220	0.056	0.070	0.034	0.050	0.106	0.1
Endrin	0.18	0.0023	0.180	0.002	0.058	0.001	0.002	0.004	0.1
Guthion	1E+183	0.01	*********	0.010	*********	0.006	0.009	0.019	0.1
Heptachlor	0.52	0.0038	0.520	0.004	0.166	0.002	0.003	0.007	0.05
Hexachlorocyclohexane	2	0.08	2.000	0.080	0.640	0.049	0.072	0.152	0.05
Lead	23.82	0.93	145.11	5.65	46.44	3.45	5.07	10.73	5
Malathion	1E+183	0.01	*********	0.010	*********	0.006	0.009	0.019	0.1
Mercury	2.4	1.3	2.400	1.300	0.768	0.793	1.129	2.388	0.2
Methoxychlor	1E+183	0.03	*********	0.030	*********	0.018	0.027	0.057	2
Mirex	1E+183	0.001	*********	0.001	*********	0.001	0.001	0.002	0.2
Nickel	626	70	2831	315	906	192	282	597	10
PCBs (Total)	2	0.014	2.000	0.014	0.640	0.009	0.013	0.027	1
Parathion	0.065	0.013	0.065	0.013	0.021	0.008	0.012	0.025	0.1
Phenanthrene	30	30	30.0	30.0	9.6	18.3	14.1	29.9	10
Pentachlorophenol	4.96	3.13	4.96	3.13	1.59	1.91	2.33	4.94	50
Selenium	20	5	20.0	5.000	6.40	3.05	4.48	9.49	10
Silver	0.92	*********	8.99	*********	2.877	*********	4.229	8.948	2
Toxaphene	0.78	0.0002	0.780	0.0002	0.250	0.0001	0.0002	0.0004	5
Tributyltin	0.13	0.024	0.130	0.024	0.042	0.015	0.022	0.046	0.01
2,4,5-Trichlorophenol	136	64	136	64	44	39	57	121	50
Zinc	52	47	372	337	119	206	175	371	5

HUMAN HEALTH
CALCULATE DAILY AVERAGE AND DAILY MAXIMUM PERMIT LIMITS

CONSTITUENT	Fish Only (ug/l)	Water and Fish (ug/l)	WLAh	LTAh	DLY AVG (ug/l)	DLY MAX (ug/l)	MAL (ug/l)
Aldrin	0.0327	0.0312	0.033	0.030	0.045	0.095	0.05
Alpha Hexachlorocyclohexane	0.997	0.645	0.997	0.927	1.363	2.884	0.05
Arsenic	*********	50	0	0	0	0	10
Barium	*********	2000	0	0	0	0	10
Benzene	312	5	312.00	290.16	426.54	902.40	10
Benzidine	0.0035	0.0011	0.004	0.003	0.005	0.010	50
Benzo(a)anthracene	0.0265	0.0261	0.027	0.025	0.036	0.077	10
Benzo(a)pyrene	0.0265	0.0261	0.027	0.025	0.036	0.077	10
Beta Hexachlorocyclohexane	3.49	2.26	3.490	3.246	4.771	10.094	0.05
Bis(chloromethyl)ether	1.59	0.0207	1.590	1.479	2.174	4.599	***
Cadmium	*********	5	0.00	0.00	0.00	0.00	1
Carbon Tetrachloride	182	5	182.00	169.26	248.81	526.40	10
Chlordane	0.0213	0.021	0.021	0.020	0.029	0.062	0.15
Chlorobenzene	4947	1305	4947	4601	6763	14308	10
Chloroform	12130	*********	12130	11281	16583	35084	10
Chromium	*********	100	0	0	0	0	10
Chrysene	0.0265	0.0261	0.027	0.025	0.036	0.077	10
Cresols	46667	4049	46667	43400	63798	134975	10
Cyanide (Free)	*********	200	0	0	0	0	20
4,4'-DDD	0.299	0.297	0.299	0.278	0.409	0.865	0.1
4,4'-DDE	0.0545	0.0544	0.055	0.051	0.075	0.158	0.1
4,4'-DDT	0.0528	0.0527	0.053	0.049	0.072	0.153	0.1
2,4-D	*********	70	0	0	0	0	10
Danitol	0.721	0.709	0.721	0.671	0.986	2.085	***
Dibromochloromethane	15354	100	15354	14279	20990	44408	10
1,2-Dibromoethane	1.15	0.0518	1.150	1.070	1.572	3.326	2
Dieldrin	0.0012	0.0012	0.001	0.001	0.002	0.003	0.1
p-Dichlorobenzene	*********	75	0	0	0	0	10
1,2-Dichloroethane	1794	5	1794.00	1668.42	2452.58	5188.79	10
1,1-Dichloroethylene	87.4	7	87.40	81.28	119.48	252.79	10
Dicofol	0.217	0.215	0.217	0.202	0.297	0.628	20
Dioxins/Furans	1.00E-06	1.00E-06	1.00E-06	9.30E-07	1.00E-06	2.89E-06	10
Endrin	*********	2	0.0	0.0	0.0	0.0	0.1
Flouride	*********	4000	0	0	0	0	500
Gamma Hexachlorocyclohexane	16	0.2	16.000	14.880	21.874	46.277	0.05
Heptachlor	0.0181	0.0177	0.018	0.017	0.025	0.052	0.05
Heptachlor Epoxide	7.39	0.2	7.390	6.873	10.103	21.374	1
Hexachlorobenzene	0.0129	0.0129	0.013	0.012	0.018	0.037	10
Hexachlorobutadiene	11.2	9.34	11.20	10.42	15.31	32.39	10
Hexachloroethane	94.1	84.4	94.1	87.5	128.6	272.2	20
Hexachlorophene	0.0532	0.0531	0.053	0.049	0.073	0.154	10
Lead	25	5	152.3	141.6	208.2	440.4	5
Mercury	0.0122	0.0122	0.012	0.011	0.017	0.035	0.2
Methoxychlor	*********	40	0	0	0	0	2
Methyl Ethyl Ketone	886667	4411	886667	824600	1212162	2564507	50
Mirex	0.0189	0.0171	0.019	0.018	0.026	0.055	0.2
Nitrate-Nitrogen	*********	10000	0	0	0	0	1000
Nitrobenzene	721	41.8	721.0	670.5	985.7	2085.3	10
N-Nitrsodiethylamine	7.68	0.0382	7.680	7.142	10.499	22.213	20
N-Nitroso-di-n-Butylamine	13.5	1.84	13.500	12.555	18.456	39.046	20
PCB's	0.0013	0.0013	0.001	0.001	0.002	0.004	1
Pentachlorobenzene	1.11	1.09	1.110	1.032	1.517	3.210	20
Pentachlorophenol	136	129	136.0	126.5	185.9	393.4	50
Pyridine	13333	88.1	13333.0	12399.7	18227.5	38563.0	20
Selenium	*********	50	0.0	0.0	0.0	0.0	10
1,2,4,5-Tetrachlorobenzene	1.52	1.43	1.520	1.414	2.078	4.396	20
Tetrachloroethylene	1832	5	1832.00	1703.76	2504.53	5298.69	10
Toxaphene	0.0445	0.044	0.045	0.041	0.061	0.129	5
2,4,5-TP (Silvex)	*********	50	0.0	0.0	0.0	0.0	2
2,4,5-Trichlorophenol	4021	2767	4021	3740	5497	11630	50
Trichloroethylene	*********	5	0.00	0.00	0.00	0.00	10
1,1,1-Trichloroethane	*********	200	0	0	0	0	10
TTHMs	*********	100	0	0	0	0	10
Vinyl Chloride	94.5	2	94.50	87.89	129.19	273.32	10

CALCULATE 70% AND 85% OF DAILY AVERAGE PERMIT LIMITS

AQUATIC LIFE	*70%*	*85%*
Aldrin	0.99	1.20
Aluminum	326	396
Arsenic	215	261
Cadmium	1.70	2.07
Carbaryl	0.66	0.80
Chlordane	0.003	0.003
Chlorpyrifos	0.026	0.031
Chromium (3+)	587	713
Chromium (6+)	5.27	6.40
Copper	11.33	13.76
Cyanide	6.71	8.15
4,4'-DDT	0.001	0.001
Demeton	0.063	0.076
Dieldrin	0.001	0.001
Diuron	43.94	53.35
Endosulfan	0.035	0.043
Endrin	0.001	0.002
Guthion	0.006	0.008
Heptachlor	0.002	0.003
Hexachlorocyclohexane	0.05	0.06
Lead	4	4
Malathion	0.006	0.008
Mercury	0.79	0.96
Methoxychlor	0.02	0.02
Mirex	0.001	0.001
Nickel	198	240
PCBs (Total)	0.009	0.011
Parathion	0.008	0.010
Phenanthrene	9.88	12.00
Pentachlorophenol	1.63	1.98
Selenium	3.14	3.81
Silver	2.96	3.60
Toxaphene	0.000	0.000
Tributyltin	0.015	0.018
2,4,5-Trichlorophenol	40.17	48.78
Zinc	123	149

HUMAN HEALTH		
Aldrin	0.031	0.038
Alpha Hexachlorocyclohexane	0.95	1.16
Arsenic	0.00	0.00
Barium	0	0
Benzene	298.57	362.55
Benzidine	0.003	0.004
Benzo(a)anthracene	0.025	0.031
Benzo(a)pyrene	0.025	0.031
Beta Hexachlorocyclohexane	3.34	4.06
Bis(chloromethyl)ether	1.52	1.85
Cadmium	0.00	0.00
Carbon Tetrachloride	174.17	211.49
Chlordane	0.020	0.025
Chlorobenzene	4734	5749
Chloroform	11608.05	14095.48
Chromium	0	0
Chrysene	0.025	0.031
Cresols	44659	54229
Cyanide (Free)	0.00	0.00
4,4'-DDD	0.29	0.35
4,4'-DDE	0.05	0.06
4,4'-DDT	0.05	0.06
2,4-D	0.00	0.00
Danitol	0.69	0.84
Dibromochloromethane	14693.32	17841.89
1,2-Dibromoethane	1.10	1.34
Dieldrin	0.001	0.001
p-Dichlorobenzene	0.00	0.00
1,2-Dichloroethane	1716.80	2084.69
1,1-Dichloroethylene	83.64	101.56
Dicofol	0.21	0.25
Dioxins/Furans	7.00E-07	8.50E-07
Endrin	0.00	0.00
Flouride	0	0
Gamma Hexachlorocyclohexane	15.31	18.59
Heptachlor	0.017	0.021
Heptachlor Epoxide	7.07	8.59
Hexachlorobenzene	0.01	0.01
Hexachlorobutadiene	10.72	13.01
Hexachloroethane	90.05	109.35
Hexachlorophene	0.05	0.06
Lead	145.73	176.96
Mercury	0.012	0.014
Methoxychlor	0.00	0.00
Methyl Ethyl Ketone	848514	1030338
Mirex	0.02	0.02
Nitrate-Nitrogen	0	0
Nitrobenzene	689.98	837.83
N-Nitrsodiethylamine	7.35	8.92
N-Nitroso-di-n-Butylamine	12.92	15.69
PCB's	0.001	0.002
Pentachlorobenzene	1.06	1.29
Pentachlorophenol	130.15	158.04
Pyridine	12759.28	15493.41
Selenium	0.00	0.00
1,2,4,5-Tetrachlorobenzene	1.45	1.77
Tetrachloroethylene	1753.17	2128.85
Toxaphene	0.04	0.05
2,4,5-TP (Silvex)	0.00	0.00
2,4,5-Trichlorophenol	3848	4673
Trichloroethylene	0.00	0.00
1,1,1-Trichloroethane	0.00	0.00
TTHMs	0.00	0.00
Vinyl Chloride	90.43	109.81

TPDES PERMIT NO. 01811
[For TCEQ office use only -
EPA I.D. No. TX0063215]

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
P. O. Box 13087
Austin, Texas 78711-3087

This permit supercedes and replaces TPDES Permit No. 01811, issued on May 18, 2001.

PERMIT TO DISPOSE OF WASTES
under provisions of
Section 402 of the Clean Water Act
and Chapter 26 of the Texas Water Code

Southwestern Electric Power Company

whose mailing address is

Welsh Power Plant
1187 County Road 4865
Pittsburg, Texas 75686

is authorized to treat and dispose of wastes from the Welsh Power Plant (SIC 4911)

located approximately two miles northwest of the Town of Cason and approximately one and one-half miles north of State Highway 11, Titus County, Texas

to Welsh Reservoir; thence to Swauano Creek; thence to Big Cypress Creek Below Lake Bob Sandlin in Segment No. 0404 of the Cypress Creek Basin

only according to effluent limitations, monitoring requirements and other conditions set forth in this permit, as well as the rules of the Texas Commission on Environmental Quality (TCEQ), the laws of the State of Texas, and other orders of the TCEQ. The issuance of this permit does not grant to the permittee the right to use private or public property for conveyance of wastewater along the discharge route described in this permit. This includes, but is not limited to, property belonging to any individual, partnership, corporation or other entity. Neither does this permit authorize any invasion of personal rights nor any violation of federal, state, or local laws or regulations. It is the responsibility of the permittee to acquire property rights as may be necessary to use the discharge route.

This permit shall expire at midnight, three years from date of issuance.

ISSUED DATE:

For the Commission

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS — Outfall Number 001

1. During the period beginning upon date of issuance and lasting through date of expiration, the permittee is authorized to discharge low volume wastes (*1) ash transport water (*1), coal pile runoff (*1), storm water, and previously monitored effluents (metal cleaning wastes) subject to the following effluent limitations:

   The daily average flow of effluent shall not exceed 20 million gallons per day (MGD). The daily maximum flow shall not exceed 60 MGD.

Effluent Characteristics	Discharge Limitations					Minimum Self-Monitoring Requirements	
	Daily Average		Daily Maximum		Single Grab	Report Daily Average and Daily Maximum	
	lbs/day	(mg/L)	lbs/day	(mg/L)	mg/L	Measurement Frequency	Sample Type
Flow (MGD)	(Report)		(Report)		N/A	Continuous	Record
Total Suspended Solids	5,007	30	16,690	100	100	1 month	Grab
Oil and Grease	2,504	15	3,338	20	20	1 month	Grab
Selenium, Total	2.17	0.013	4.51	0.027	0.03	1/week	Grab
Aluminum, Total (*2)	Report	Report	Report	Report	N/A	1/week	Grab

(*1) See Other Requirements No. 2.
(*2) See Other Requirements No. 13.

2. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored 1/week, by grab sample.

3. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.

4. Effluent monitoring samples shall be taken at the following location: At Outfall 001, at the discharge from the secondary bottom ash pond settling basin prior to discharge to Welsh Reservoir.

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS — Outfall Number 101

1. During the period beginning upon date of issuance and lasting through date of expiration, the permittee is authorized to discharge metal cleaning wastes subject to the following effluent limitations:

   Volume: Intermittent and flow variable.

Effluent Characteristics	Discharge Limitations			Minimum Self-Monitoring Requirements	
	Daily Average mg/L	Daily Maximum mg/L	Single Grab mg/L	Report Daily Average and Daily Maximum Measurement Frequency	Sample Type
Flow (MGD)	(Report)	(Report)	N/A	1/day (*2)	Estimate
Iron, Total	1.0	1.0	1.0	1/week (*2)	Grab (*3)
Copper, Total	0.5	1.0	1.0	1/week (*2)	Grab (*3)

(*1) See Other Requirements No. 2.
(*2) When discharge occurs.
(*3) Since more than one source is associated with this particular waste category, grab samples from each source shall be either physically or arithmetically composited into a single flow weighted sample for analysis and/or reporting.

2. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.

3. Effluent monitoring samples shall be taken at the following location: At Outfall 101, where metal cleaning wastes are discharged and prior to mixing with any other wastewaters.

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS — Outfall Number 003

1. During the period beginning upon date of issuance and lasting through date of expiration, the permittee is authorized to discharge once through cooling water (*1), storm water, and previously monitored effluents subject to the following effluent limitations:

The daily average flow of effluent shall not exceed 1,425 million gallons per day (MGD). The daily maximum flow shall not exceed 1,425 MGD.

Effluent Characteristics	Discharge Limitations					Minimum Self-Monitoring Requirements	
	Daily Average		Daily Maximum		Single Grab	Report Daily Average and Daily Maximum	
	lbs/day	(mg/L)	lbs/day	(mg/L)	mg/L	Measurement Frequency	Sample Type
Flow (MGD)	(Report)		(Report)		N/A	1/2 hours	Calculated
Temperature (degrees F)	Report (*1)		Report (*1)		N/A	1/2 hours	In-Situ
Free Available Chlorine (*1)	198	0.2	495	0.5	N/A	1/week (*3)	Grab
Total Residual Chlorine (*1)	N/A	N/A	198	0.2	N/A	1/week (*3)	Grab

(*1) See Other Requirements No. 2.
(*2) Samples shall be representative of periods of chlorination. Sampling is required only if there is chlorination during a calendar week.

2. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.

3. Effluent monitoring samples shall be taken at the following location: At Outfall 003, where once through cooling water is discharged from the onsite discharge canal into Welsh Reservoir. If the cooling towers are in use, a grab sample shall be taken at the discharge from the cooling towers prior to discharge into Welsh Reservoir and from the onsite discharge canal into Welsh Reservoir. The samples shall be combine either physically or arithmetically into a single flow weighted sample for analysis and reporting.

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS — Outfall Number 103

1. During the period beginning upon date of issuance and lasting through date of expiration, the permittee is authorized to discharge treated domestic wastewater subject to the following effluent limitations:

   The daily average flow of effluent shall not exceed 0.006 million gallons per day (MGD). The daily maximum flow shall not exceed 0.010 MGD.

Effluent Characteristics	Discharge Limitations					Minimum Self-Monitoring Requirements	
	Daily Average		Daily Maximum		Single Grab	Report Daily Average and Daily Maximum	
	lbs/day	(mg/L)	lbs/day	(mg/L)	mg/L	Measurement Frequency	Sample Type
Flow (MGD)	(Report)		(Report)		N/A	1/day	Estimate
Biochemical Oxygen Demand (5-day)	1.0	20	2.3	45	45	1/week	Grab
Total Suspended Solids	1.0	20	2.3	45	45	1/week	Grab

2. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored 1/week, by grab sample.

3. The effluent shall contain a minimum chlorine residual of 1.0 mg/l and maximum chlorine residual of 4.0 mg/L after a detention time of at least 20 minutes (based on peak flow), and shall be monitored 1/week, by grab sample. The sample shall be taken at the chlorine contact chamber, prior to final filtration and discharge via Outfall 103. An equivalent method of disinfection may be substituted only with prior approval of the Executive Director.

4. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.

5. Effluent monitoring samples shall be taken at the following location: At Outfall 103, at the discharge from the sewage treatment system prior to discharge to Welsh Reservoir.

DEFINITIONS AND STANDARD PERMIT CONDITIONS

As required by Title 30 Texas Administrative Code (TAC) Chapter 305, certain regulations appear as standard conditions in waste discharge permits. 30 TAC §§ 305.121 - 305.129, Subchapter F, "Permit Characteristics and Conditions" as promulgated under the Texas Water Code §§ 5.103 and 5.105, and the Texas Health and Safety Code §§ 361.017 and 361.024(a), establish the characteristics and standards for waste discharge permits, including sewage sludge, and those sections of 40 Code of Federal Regulations (CFR) 122 adopted by reference by the Commission. The following text includes these conditions and incorporates them into this permit. All definitions in Section 26.001 of the Texas Water Code and 30 TAC Chapter 305 shall apply to this permit and are incorporated by reference. Some Specific definitions of words or phrases used in this permit are as follows:

1. Flow Measurements

   a. Annual average flow - the arithmetic average of all daily flow determinations taken within the preceding 12 consecutive calendar months. The annual average flow determination shall consist of daily flow volume determinations made by a totalizing meter, charted on a chart recorder and limited to major domestic wastewater discharge facilities with a 1 million gallons per day or greater permitted flow.

   b. Daily average flow - the arithmetic average of all determinations of the daily discharge within a period of one calendar month. The daily average flow determination shall consist of determinations made on at least four separate days. If instantaneous measurements are used to determine the daily discharge, the determination shall be the arithmetic average of all instantaneous measurements taken during that month. Daily average flow determination for intermittent discharges shall consist of a minimum of three flow determinations on days of discharge.

   c. Daily maximum flow - the highest total flow for any 24-hour period in a calendar month.

   d. Instantaneous flow - the measured flow during the minimum time required to interpret the flow measuring device.

   e. 2-hour peak flow (domestic wastewater treatment plants) - the maximum flow sustained for a two-hour period during the period of daily discharge. Multiple measurements of instantaneous maximum flow within a two-hour period may be compared to the permitted 2-hour peak flow.

   f. Maximum 2-hour peak flow (domestic wastewater treatment plants) - the highest 2-hour peak flow for any 24-hour period in a calender month.

2. Concentration Measurements

   a. Daily average concentration - the arithmetic average of all effluent samples, composite or grab as required by this permit, within a period of one calendar month, consisting of at least four separate representative measurements. When four samples are not available in a calendar month, the arithmetic average of the four most recent measurements or the arithmetic average (weighted by flow) of all values taken during the month shall be used as the daily average concentration.

   b. 7-day average concentration - the arithmetic average of all effluent samples, composite or grab as required by this permit, within a period of one calendar week, Sunday through Saturday.

   c. Daily maximum concentration - the maximum concentration measured on a single day, by composite sample unless otherwise specified elsewhere in this permit, within a period of one calender month.

   d. Daily discharge - the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in terms of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the sampling day. For pollutants with limitations expressed in other units of measurement, the "daily discharge" is calculated as the average measurement of the pollutant over the sampling day.

      The "daily discharge" determination of concentration made using a composite sample shall be the concentration of the composite sample. When grab samples are used, the "daily discharge" determination of concentration shall be the arithmetic average (weighted by flow value) of all samples collected during that day.

   e. Fecal coliform bacteria concentration - the number of colonies of fecal coliform bacteria per 100 milliliters effluent. The fecal coliform bacteria daily average is a geometric mean of the values for the effluent samples collected in a calendar month. The geometric mean shall be determined by calculating the nth root of the product of all

measurements made in a particular period of time. For example in a month's time, where n equals the number of measurements made; or, computed as the antilogarithm of the sum of the logarithm of each measurement made. For any measurement of fecal coliform bacteria equaling zero, a substituted value of one shall be made for input into either computation method.

3. Sample Type

   a. Composite sample - for domestic wastewater a sample made up of a minimum of three effluent portions collected in a continuous 24-hour period or during the period of daily discharge if less than 24 hours, and combined in volumes proportional to flow, and collected no closer than two hours apart . For industrial wastewater a composite sample is a sample made up of a minimum of three effluent portions collected in a continuous 24-hour period or during the period of daily discharge if less than 24 hours, and combined in volumes proportional to flow, and collected no closer than one hour apart.

   b. Grab sample - an individual sample collected in less than 15 minutes.

4. Treatment Facility (facility) - wastewater facilities used in the conveyance, storage, treatment, recycling, reclamation and/or disposal of domestic sewage, industrial wastes, agricultural wastes, recreational wastes, or other wastes including sludge handling or disposal facilities under the jurisdiction of the Commission.

5. The term "sewage sludge" is defined as solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in 30 TAC Chapter 312. This includes the solids which have not been classified as hazardous waste separated from wastewater by unit processes .

6. Bypass - the intentional diversion of a waste stream from any portion of a treatment facility.

MONITORING AND REPORTING REQUIREMENTS

1. Self-Reporting

   Monitoring results shall be provided at the intervals specified in the permit. Unless otherwise specified in this permit or otherwise ordered by the Commission, the permittee shall conduct effluent sampling and reporting in accordance with 30 TAC §§ 319.4 - 319.12. Unless otherwise specified, a monthly effluent report shall be submitted each month, to the location(s) specified on the reporting form or the instruction sheet, by the 20th day of the following month for each discharge which is described by this permit whether or not a discharge is made for that month. Monitoring results must be reported on the approved TPDES self-report form, Discharge Monitoring Report (DMR) Form EPA No. 3320-1, signed and certified as required by Monitoring and Reporting Requirements No. 10.

   As provided by state law, the permittee is subject to administrative, civil and criminal penalties, as applicable, for negligently or knowingly violating the Clean Water Act, the Texas Water Code, Chapters 26, 27, and 28, and Texas Health and Safety Code, Chapter 361, including but not limited to knowingly making any false statement, representation, or certification on any report, record, or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance, or falsifying, tampering with or knowingly rendering inaccurate any monitoring device or method required by this permit or violating any other requirement imposed by state or federal regulations.

2. Test Procedures

   Unless otherwise specified in this permit, test procedures for the analysis of pollutants shall comply with procedures specified in 30 TAC §§319.11 - 319.12. Measurements, tests and calculations shall be accurately accomplished in a representative manner.

3. Records of Results

   a. Monitoring samples and measurements shall be taken at times and in a manner so as to be representative of the monitored activity.

   b. Except for records of monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 CFR Part 503), monitoring and reporting records, including strip charts and records of calibration and maintenance, copies of

all records required by this permit, records of all data used to complete the application for this permit, and the certification required by 40 CFR § 264.73(b)(9) shall be retained at the facility site and/or shall be readily available for review by a TCEQ representative for a period of three years from the date of the record or sample, measurement, report, application or certification. This period shall be extended at the request of the Executive Director.

c. Records of monitoring activities shall include the following:

i. date, time and place of sample or measurement;
ii. identity of individual who collected the sample or made the measurement.
iii. date and time of analysis;
iv. identity of the individual and laboratory who performed the analysis;
v. the technique or method of analysis; and
vi. the results of the analysis or measurement and quality assurance/quality control records.

The period during which records are required to be kept shall be automatically extended to the date of the final disposition of any administrative or judicial enforcement action that maybe instituted against the permittee.

4. Additional Monitoring by Permittee

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit using approved analytical methods as specified above, all results of such monitoring shall be included in the calculation and reporting of the values submitted on the approved TPDES self-report form. Increased frequency of sampling shall be indicated on the self-report form.

5. Calibration of Instruments

All automatic flow measuring and/or recording devices and/or totalizing meters for measuring flows shall be accurately calibrated by a trained person at plant start-up and as often thereafter as necessary to ensure accuracy, but not less often than annually unless authorized by the Executive Director for a longer period. Such person shall verify in writing that the device is operating properly and giving accurate results. Copies of the verification shall be retained at the facility site and/or shall be readily available for review by a TCEQ representative for a period of three years.

6. Compliance Schedule Reports

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of the permit shall be submitted no later than 14 days following each schedule date to the Regional Office and the Manager of the Enforcement Section III (MC 149) of the Enforcement Division.

7. Noncompliance Notification

a. In accordance with 30 TAC § 305.125(9) any noncompliance which may endanger human health or safety, or the environment shall be reported by the permittee to the TCEQ. Report of such information shall be provided orally or by facsimile transmission (FAX) to the Regional Office within 24 hours of becoming aware of the noncompliance. A written submission of such information shall also be provided by the permittee to the Regional Office and the Manager of the Enforcement Section III (MC 149) of the Enforcement Division within five working days of becoming aware of the noncompliance. The written submission shall contain a description of the noncompliance and its cause; the potential danger to human health or safety, or the environment; the period of noncompliance, including exact dates and times; if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance, and to mitigate its adverse effects.

b. The following violations shall be reported under Monitoring and Reporting Requirement 7.a.:

i. Unauthorized discharges as defined in Permit Condition 2(g).

ii. Any unanticipated bypass which exceeds any effluent limitation in the permit.

iii. Violation of a permitted maximum daily discharge limitation for pollutants listed specifically in the Other Requirements section of an Industrial TPDES permit.

c. In addition to the above, any effluent violation which deviates from the permitted effluent limitation by more than 40% shall be reported by the permittee in writing to the Regional Office and the Manager of the Enforcement Section III (MC 149) of the Enforcement Division within 5 working days of becoming aware of the noncompliance.

d. Any noncompliance other than that specified in this section, or any required information not submitted or submitted incorrectly, shall be reported to the Water Quality Compliance Monitoring Team (MC 224) of the Enforcement Division as promptly as possible. This requirement means to report these types of noncompliance on the approved TPDES self-report form.

8. In accordance with the procedures described in 30 TAC §§ 305.21, 305.22 and 305.23 (relating to Emergency Orders, Temporary Orders and Executive Director Authorizations) if the permittee knows in advance of the need for a bypass, it shall submit prior notice by applying for such authorization.

9. Changes in Discharges of Toxic Substances

All existing manufacturing, commercial, mining, and silvicultural permittees shall notify the Regional Office, orally or by facsimile transmission within 24 hours, and both the Regional Office and the Manager of the Enforcement Section III (MC 149) of the Enforcement Division in writing within five (5) working days, after becoming aware of or having reason to believe:

a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant listed at 40 CFR Part 122, Appendix D, Tables II and III (excluding Total Phenols) which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":

i. One hundred micrograms per liter (100 µg/L);
ii. Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
iii. Five (5) times the maximum concentration value reported for that pollutant in the permit application; or
iv. The level established by the TCEQ.

b. That any activity has occurred or will occur which would result in any discharge, on a nonroutine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":

i. Five hundred micrograms per liter (500 µg/L);
ii. One milligram per liter (1 mg/L) for antimony;
iii. Ten (10) times the maximum concentration value reported for that pollutant in the permit application; or
iv. The level established by the TCEQ.

10. Signatories to Reports

All reports and other information requested by the Executive Director shall be signed by the person and in the manner required by 30 TAC § 305.128 (relating to Signatories to Reports).

11. All POTWs must provide adequate notice to the Executive Director of the following:

a. Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to section 301 or 306 of the CWA if it were directly discharging those pollutants;

b. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit; and

c. For the purpose of this paragraph, adequate notice shall include information on:

i. The quality and quantity of effluent introduced into the POTW; and
ii. Any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

PERMIT CONDITIONS

1. General

   a. When the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in an application or in any report to the Executive Director, it shall promptly submit such facts or information.

   b. This permit is granted on the basis of the information supplied and representations made by the permittee during action on an application in accordance with 30 TAC Chapter 50 and the application process in accordance with 30 TAC Chapter 281, and relying upon the accuracy and completeness of that information and those representations in accordance with 30 TAC Chapter 305. After notice in accordance with 30 TAC Chapter 39 and opportunity for a hearing in accordance with 30 TAC §§ 55.21 - 55.31, Subchapter B, "Hearing Requests, Public Comment", this permit may be modified, suspended, or revoked, in whole or in part in accordance with 30 TAC Chapter 305 Subchapter D, during its term for cause including but not limited to, the following:

      i. Violation of any terms or conditions of this permit;
      ii. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or
      iii. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.

   c. The permittee shall furnish to the Executive Director, upon request and within a reasonable time, any information to determine whether cause exists for amending, revoking, suspending or terminating the permit. The permittee shall also furnish to the Executive Director, upon request, copies of records required to be kept by the permit.

2. Compliance

   a. Acceptance of the permit by the person to whom it is issued constitutes acknowledgment and agreement that such person will comply with all the terms and conditions embodied in the permit, and the rules and other orders of the Commission.

   b. The permittee has a duty to comply with all conditions of the permit. Failure to comply with any permit condition constitutes a violation of the permit and the Texas Water Code or the Texas Health and Safety Code, and is grounds for enforcement action, for permit amendment, revocation or suspension, or for denial of a permit renewal application or of an application for a permit for another facility.

   c. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit.

   d. The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal or other permit violation which has a reasonable likelihood of adversely affecting human health or the environment.

   e. Authorization from the Commission is required before beginning any change in the permitted facility or activity that may result in noncompliance with any permit requirements.

   f. A permit may be amended, suspended and reissued, or revoked for cause in accordance with 30 TAC §§ 305.62 and 305.66 and the Texas Water Code Section 7.302. The filing of a request by the permittee for a permit amendment, suspension and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

   g. There shall be no unauthorized discharge of wastewater or any other waste. For the purpose of this permit, an unauthorized discharge is considered to be any discharge of wastewater into or adjacent to waters in the state at any location not permitted as an outfall or otherwise defined in the Other Requirements section of this permit.

   h. In accordance with 30 TAC § 305.535(a), the permittee may allow any bypass to occur from a TPDES permitted facility which does not cause permitted effluent limitations to be exceeded, but only if the diversion is also for essential maintenance to assure efficient operation.

   i. The permittee is subject to administrative, civil, and criminal penalties, as applicable, under Texas Water Code §§ 26.136, 26.212, and 26.213 for violations including but not limited to negligently or knowingly violating the federal Clean Water Act, §§ 301, 302, 306, 307, 308, 318, or 405, or any condition or limitation implementing any sections

in a permit issued under the CWA § 402, or any requirement imposed in a pretreatment program approved under the CWA §§ 402 (a)(3) or 402 (b)(8).

3. Inspections and Entry

   a. Inspection and entry shall be allowed as prescribed in the Texas Water Code Chapters 26, 27, and 28, and Texas Health and Safety Code Chapter 361.

   b. The members of the Commission and employees and agents of the Commission are entitled to enter any public or private property at any reasonable time for the purpose of inspecting and investigating conditions relating to the quality of water in the state or the compliance with any rule, regulation, permit or other order of the Commission. Members, employees, or agents of the Commission and Commission contractors are entitled to enter public or private property at any reasonable time to investigate or monitor or, if the responsible party is not responsive or there is an immediate danger to public health or the environment, to remove or remediate a condition related to the quality of water in the state. Members, employees, Commission contractors, or agents acting under this authority who enter private property shall observe the establishment's rules and regulations concerning safety, internal security, and fire protection, and if the property has management in residence, shall notify management or the person then in charge of his presence and shall exhibit proper credentials. If any member, employee, Commission contractor, or agent is refused the right to enter in or on public or private property under this authority, the Executive Director may invoke the remedies authorized in Texas Water Code Section 7.002.

4. Permit Amendment and/or Renewal

   a. The permittee shall give notice to the Executive Director as soon as possible of any planned physical alterations or additions to the permitted facility if such alterations or additions would require a permit amendment or result in a violation of permit requirements. Notice shall also be required under this paragraph when:

      i. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in accordance with 30 TAC § 305.534 (relating to New Sources and New Dischargers); or

      ii. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements in Monitoring and Reporting Requirements No. 8 and as adopted by 30 TAC § 305.531(a) (relating to Establishing and Calculating Additional Conditions and Limitations for TPDES Permits);

      iii The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.

   b. Prior to any facility modifications, additions and/or expansions of a permitted facility that will increase the plant capacity beyond the permitted flow, the permittee must apply for and obtain proper authorization from the Commission before commencing construction.

   c. The permittee must apply for an amendment or renewal at least 180 days prior to expiration of the existing permit in order to continue a permitted activity after the expiration date of the permit. Authorization to continue such activity will terminate upon the effective denial of said application.

   d. Prior to accepting or generating wastes which are not described in the permit application or which would result in a significant change in the quantity or quality of the existing discharge, the permittee must report the proposed changes to the Commission. The permittee must apply for a permit amendment reflecting any necessary changes in permit conditions, including effluent limitations for pollutants not identified and limited by this permit.

   e. In accordance with the Texas Water Code § 26.029(b), after a public hearing, notice of which shall be given to the permittee, the Commission may require the permittee, from time to time, for good cause, in accordance with applicable laws, to conform to new or additional conditions.

   f. If any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under Section 307(a) of the Clean Water Act for a toxic pollutant which is present in the discharge and that standard or prohibition is more stringent than any limitation on the pollutant in this permit, this permit shall be modified or revoked and reissued to conform to the toxic effluent standard or prohibition. The

permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that established those standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

5. Permit Transfer

   a. Prior to any transfer of this permit, Commission approval must be obtained. The Commission shall be notified in writing of any change in control or ownership of facilities authorized by this permit. Such notification should be sent to the Water Quality Applications Team (MC 161) of the Registration, Review & Reporting Division.

   b. A permit may be transferred only according to the provisions of 30 TAC § 305.64 (relating to Transfer of Permits) and 30 TAC § 50.33 (relating to Executive Director Action on Application for Transfer).

6. Relationship to Hazardous Waste Activities

   This permit does not authorize any activity of hazardous waste storage, processing, or disposal which requires a permit or other authorization pursuant to the Texas Health and Safety Code.

7. Relationship to Water Rights

   Disposal of treated effluent by any means other than discharge directly to the waters in the state must be specifically authorized in this permit and may require a permit pursuant to Chapter 11 of the Texas Water Code.

8. Property Rights

   A permit does not convey any property rights of any sort, or any exclusive privilege.

9. Permit Enforceability

   The conditions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstances, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

OPERATIONAL REQUIREMENTS

1. The permittee shall at all times ensure that the facility and all of its systems of collection, treatment, and disposal are properly operated and maintained. This includes the regular, periodic examination of wastewater solids within the treatment plant by the operator in order to maintain an appropriate quantity and quality of solids inventory as described in the various operator training manuals and according to accepted industry standards for process control such as the Commission's "Recommendations for Minimum Process Control Tests for Domestic Wastewater Treatment Facilities." Process control records shall be retained at the facility site and/or shall be readily available for review by a TCEQ representative for a period of three years.

2. Upon request by the Executive Director, the permittee shall take appropriate samples and provide proper analysis in order to demonstrate compliance with Commission rules. Unless otherwise specified in this permit or otherwise ordered by the Commission, the permittee shall comply with all provisions of 30 TAC §§ 312.1 - 312.13 concerning sewage sludge use and disposal and 30 TAC §§ 319.21 - 319.29 concerning the discharge of certain hazardous metals.

3. Domestic wastewater treatment facilities shall comply with the following provisions:

   a. The permittee shall notify the Executive Director in care of the Wastewater Permitting Section (MC 148) of the Water Quality Division, in writing of any closure activity or facility expansion at least 90 days prior to conducting such activity.

   b. Closure activities include those associated with any pit, tank, pond, lagoon, or surface impoundment regulated by this permit.

c. As part of the notification, the permittee shall submit to the Municipal Permits Team (MC 148) of the Wastewater Permitting Section of the Water Quality Division, a closure plan which has been developed in accordance with the "Closure Guidance Documents Nos. 4 and 5" available through the Publications Inventory and Distribution Section (MC 195) of the Agency Communications Division.

4. The permittee is responsible for installing prior to plant start-up, and subsequently maintaining, adequate safeguards to prevent the discharge of untreated or inadequately treated wastes during electrical power failures by means of alternate power sources, standby generators, and/or retention of inadequately treated wastewater.

5. Unless otherwise specified, the permittee shall provide a readily accessible sampling point and, where applicable, an effluent flow measuring device or other acceptable means by which effluent flow may be determined.

6. The permittee shall remit an annual waste treatment fee to the Commission as required by 30 TAC Chapter 305 Subchapter M and an annual water quality assessment fee to the Commission as required by 30 TAC Chapter 320. Failure to pay either fee may result in revocation of this permit.

7. Documentation

For all written notifications to the Commission required of the permittee by this permit, the permittee shall keep and make available a copy of each such notification under the same conditions as self-monitoring data are required to be kept and made available. Except for applications, effluent data, permits, and other data specified in 30 TAC § 305.46, any information submitted pursuant to this permit may be claimed as confidential by the submitter. Any such claim must be asserted in the manner prescribed in the application form or by stamping the words "confidential business information" on each page containing such information. If no claim is made at the time of submission, information may be made available to the public without further notice.

8. Facilities which generate domestic wastewater shall comply with the following provisions; domestic wastewater treatment facilities at permitted industrial sites are excluded.

a. Whenever flow measurements for any domestic sewage treatment facility reach 75 percent of the permitted daily average or annual average flow for three consecutive months, the permittee must initiate engineering and financial planning for expansion and/or upgrading of the domestic wastewater treatment and/or collection facilities. Whenever, the flow reaches 90 percent of the permitted daily average or annual average flow for three consecutive months, the permittee shall obtain necessary authorization from the Commission to commence construction of the necessary additional treatment and/or collection facilities. In the case of a domestic wastewater treatment facility which reaches 75 percent of the permitted daily average or annual average flow for three consecutive months, and the planned population to be served or the quantity of waste produced is not expected to exceed the design limitations of the treatment facility, the permittee shall submit an engineering report supporting this claim to the Executive Director of the Commission.

If in the judgement of the Executive Director the population to be served will not cause permit noncompliance, then the requirement of this section may be waived. To be effective, any waiver must be in writing and signed by the Director of the Enforcement Division (MC 149) of the Commission, and such waiver of these requirements will be reviewed upon expiration of the existing permit; however, any such waiver shall not be interpreted as condoning or excusing any violation of any permit parameter.

b. The plans and specifications for domestic sewage collection and treatment works associated with any domestic permit must be approved by the Commission, and failure to secure approval before commencing construction of such works or making a discharge is a violation of this permit and each day is an additional violation until approval has been secured.

c. Permits for domestic wastewater treatment plants are granted subject to the policy of the Commission to encourage the development of area-wide waste collection, treatment and disposal systems. The Commission reserves the right to amend any domestic wastewater permit in accordance with applicable procedural requirements to require the system covered by this permit to be integrated into an area-wide system, should such be developed; to require the delivery of the wastes authorized to be collected in, treated by or discharged from said system, to such area-wide system; or to amend this permit in any other particular to effectuate the Commission's policy. Such amendments may be made when the changes required are advisable for water quality control purposes and are feasible on the basis of waste treatment technology, engineering, financial, and related considerations existing at the time the changes are required, exclusive of the loss of investment in or revenues from any then existing or proposed waste collection, treatment or disposal system.

9. Domestic wastewater treatment plants shall be operated and maintained by sewage plant operators holding a valid certificate of competency at the required level as defined in 30 TAC Chapter 325.

10. For publicly owned treatment works, the 30-day average (or Monthly average) percent removal for BOD and TSS shall not be less than 85 percent, unless otherwise authorized by this permit.

11. Facilities which generate industrial solid waste as defined in 30 TAC § 335.1 shall comply with these provisions:

    a. Any solid waste generated by the permittee during the management and treatment of wastewater, as defined in 30 TAC § 335.1 (including but not limited to such wastes as garbage, refuse, sludge from a waste treatment, water supply treatment plant or air pollution control facility, discarded materials, discarded materials to be recycled, whether the waste is solid, liquid, or semisolid) must be managed in accordance with all applicable provisions of 30 TAC Chapter 335, relating to Industrial Solid Waste Management.

    b. Industrial wastewater that is being collected, accumulated, stored, or processed before discharge through any final discharge outfall, specified by this permit, is considered to be industrial solid waste until the wastewater passes through the actual point source discharge and must be managed in accordance with all applicable provisions of 30 TAC Chapter 335.

    c. The permittee shall provide written notification, pursuant to the requirements of 30 TAC § 335.6(g), to the Corrective Action Section (MC 127) of the Remediation Division informing the Commission of any closure activity involving an Industrial Solid Waste Management Unit, at least 90 days prior to conducting such an activity.

    d. Construction of any industrial solid waste management unit requires the prior written notification of the proposed activity to the Registration & Reporting Section (MC 129) of the Registration, Review & Reporting Division. No person shall dispose of industrial solid waste, including sludge or other solids from wastewater treatment processes, prior to fulfilling the deed recordation requirements of 30 TAC § 335.5.

    e. The term "industrial solid waste management unit" means a landfill, surface impoundment, waste-pile, industrial furnace, incinerator, cement kiln, injection well, container, drum, salt dome waste containment cavern, or any other structure vessel, appurtenance, or other improvement on land used to manage industrial solid waste.

    f. The permittee shall keep management records for all sludge (or other waste) removed from any wastewater treatment process. These records shall fulfill all applicable requirements of 30 TAC Chapter 335 and must include the following, as it pertains to wastewater treatment and discharge:

        i. Volume of waste and date(s) generated from treatment process;
        ii. Volume of waste disposed of on-site or shipped off-site;
        iii. Date(s) of disposal;
        iv. Identity of hauler or transporter;
        v. Location of disposal site; and
        vi. Method of final disposal.

        The above records shall be maintained on a monthly basis. The records shall be retained at the facility site and/or shall be readily available for review by authorized representatives of the TCEQ for at least five years.

12. For industrial facilities to which the requirements of 30 TAC Chapter 335 do not apply, sludge and solid wastes, including tank cleaning and contaminated solids for disposal, shall be disposed of in accordance with Chapter 361 of the Health and Safety Code of Texas.

TCEQ Revision 3/2000

OTHER REQUIREMENTS

1. Violations of daily maximum limitations for the following pollutants shall be reported orally to TCEQ Region 5, within 24 hours from the time the permittee becomes aware of the violation followed by a written report within five days:

POLLUTANT	MAL (mg/L)
Aluminum (Total)	0.030
Copper (Total)	0.010
Selenium (Total)	0.010

Test methods utilized to determine compliance with the permit limitations shall be sensitive enough to detect the parameters listed above at the minimum analytical level (MAL). Permit compliance/noncompliance determinations will be based on the effluent limitations contained in this permit with consideration given to the MAL for toxic organic and toxic inorganic parameters. When an analysis of an effluent sample for these parameters results in a measurement of less than the MAL, that parameter shall be reported as "< (MAL value)" and this shall be interpreted as a value of zero (0) for compliance purposes.

2. DEFINITIONS

A. The term "10-year, 24-hour rainfall event" shall mean a rainfall event with the probable recurrence interval of once in ten years as defined by the National Weather Service in Technical Paper No. 40, "Rainfall Frequency Atlas of the United States," May 1961, and subsequent amendments, or equivalent regional or state rainfall event and facility design, construction, and operation resides with the permittee.

B. Daily average temperature is defined as the flow weighted average temperature (FWAT) shall be computed and recorded on a daily basis. FWAT shall be computed at equal time intervals not greater than two hours. The method of calculating FWAT is as follows:

$$\text{FWAT} = \frac{\text{SUMMATION (INSTANTANEOUS FLOW X INSTANTANEOUS TEMPERATURE)}}{\text{SUMMATION (INSTANTANEOUS FLOW)}}$$

The "daily average temperature" shall be the arithmetic average of all FWAT's calculated during the calendar month.

The "daily maximum temperature" shall be the highest FWAT calculated during the calendar month.

C. The term "total residual chlorine" (or total residual oxidants for intake water with bromides) means the value obtained using the amperometric method for total residual chlorine described in 40 CFR Part 136. The permittee may use the DPD spectrophotometric method (EPA Method 330.5) upon written notification of the Executive Director, provided that EPA has modified the existing effluent limitation guidelines (40 CFR Part 423) or has provided the permittee with documentation that this new test method is appropriate for use by steam electric power generating facilities.

Total residual chlorine may not be discharged from any single generating unit for more than two hours per day unless the discharger demonstrates to the permitting authority that discharge for more than two hours is required for macroinvertebrate control.

Simultaneous multi-unit chlorination is not permitted.

D. The term "metal cleaning waste" means any wastewater resulting from cleaning (with or without chemical compounds) any metal process equipment including, but not limited to, boiler tube cleaning, boiler fireside cleaning, and air preheater cleaning.

The term "chemical metal cleaning waste" means any wastewater resulting from the cleaning of any metal process equipment with chemical compounds, including, but not limited to, boiler tube cleaning.

E. The term "low volume waste sources" includes "utility waste waters" and "water treatment wastes". "Utility waste waters" include, but are not limited to: wet scrubber air pollution control systems, evaporator blowdown, boiler blowdown, laboratory and sampling streams, floor drainage, cooling tower basin cleaning wastes, and blowdown from recirculating house service water systems. "Water treatment wastes" include, but are not limited to: ion exchange water treatment system wastes, demineralizer backwash, cold lime water treatment wastes, reverse osmosis waste, and water treatment system filter backwash. Sanitary and air conditioning wastes are not included.

F. The term "once through cooling water" means water passed through the main cooling condensers in one or two passes for the purpose of removing waste heat.

G. The term "ash transport water" shall mean water used in the transport of either fly ash or bottom ash.

H. The term "coal pile runoff" means the rainfall runoff from or through any coal, ash, or other material storage pile.

Any untreated overflow from facilities designed, constructed, and operated to treat the volume of "coal pile runoff" which is associated with a 10-year, 24-hour rainfall event shall not be subject to the limitations specified on page 2 of this permit. The burden of proof regarding the rainfall event and facility design, construction, and operation resides with the permittee.

3. There shall be no discharge of polychlorinated biphenyl compounds, such as those commonly used for transformer fluid.

4. This provision supersedes and replaces Provision 1, Paragraph 1 of Monitoring and Reporting Requirements found on Page 4 of this permit.

Monitoring results shall be provided at the intervals specified in the permit. Unless otherwise specified in this permit or otherwise ordered by the Commission, the permittee shall conduct effluent sampling and reporting in accordance with 30 TAC §§ 319.4 - 319.12. Unless otherwise specified, a monthly effluent report shall be submitted each month, to the location(s) specified on the reporting form or the instruction sheet, by the 25th day of the following month for each discharge which is described by this permit whether or not a discharge is made for that month. Monitoring results must be reported on the approved TPDES self-report form, Discharge Monitoring Report (DMR) Form EPA No. 3320-1, signed and certified as required by Monitoring and Reporting Requirements No. 10.

5. The following table describes the ponds authorized by this permit:

Pond No.	Wastewater Type	Surface Area (Acres)	Capacity (Acre-feet)	Liner Type
1 - Primary Ash Pond	Ash transport water, low volume waste, coal pile runoff	23	200	Native clay

Pond No.	Wastewater Type	Surface Area (Acres)	Capacity (Acre-feet)	Liner Type
2 - Secondary Ash Pond	Ash transport water, low volume waste, coal pile runoff	3	30	Native clay
3 - Acid Wash Pond	Metal cleaning wastes	0.5	6	Native clay
4 - Ash Pond	Ash transport water, low volume waste, coal pile runoff	17.5	265	Synthetic

6. After May 18, 2001, all newly constructed process wastewater ponds shall be lined in compliance with one of the following requirements:

   a. Soil Liner: The soil liner shall contain at least 3 feet of clay-rich (liquid limit greater than or equal to 30 and plasticity index greater than or equal to 15) soil material along the sides and bottom of the pond compacted in lifts of no more than 9 inches, to 95% standard proctor density at the optimum moisture content to achieve a permeability equal to or less than 1×10^{-7} cm/sec.

   b. Plastic/Rubber Liner: The liner shall be either a plastic or rubber membrane liner at least 30 mils in thickness which completely covers the sides and the bottom of the pond and which is not subject to degradation due to reaction with wastewater with which it will come into contact. If this lining material is vulnerable to ozone or ultraviolet deterioration it should be covered with a protective layer of soil of at least 6 inches. A leak detection system is also required.

   c. Alternate Liner: The permittee shall submit plans for any other pond lining method. Pond liner plans must be approved in writing by the Executive Director of the Texas Commission on Environmental Quality prior to pond construction.

   The permittee shall notify the Texas Commission on Environmental Quality Regional Office upon completion of construction of the pond and at least a week prior to its use. Certification of the lining specifications shall be provided by a Texas licensed professional engineer and shall be available for inspection by TCEQ personnel upon request. For new construction, the certification and the test results of soils forming the bottom and sides of the pond shall be submitted to the TCEQ, Wastewater Permitting Section (MC-148) and Regional Office for review prior to discharging any wastewaters into the ponds. Permeability tests shall be made with material typical of the expected use.

7. All wastewater retention ponds shall be operated in such a manner as to maintain a minimum freeboard of two feet.

8. All coal shall be stored in such a manner that storm water runoff is diverted to the ash ponds.

9. This requirement is applicable to the treatment and disposal of domestic wastewater at Outfall 103 only.

   On-site disposal of sewage sludge is not authorized. The permittee shall ensure that all sewage sludge which is not a hazardous waste (as defined in 30 TAC Chapter 335) is handled, transported, and disposed of in compliance with the applicable provisions of 30 TAC Chapter 312. The permittee shall ensure that all sewage sludge which is a hazardous waste (as defined in 30 TAC Chapter 335) is handled, transported, and disposed of in compliance with the applicable provisions of 30 TAC Chapter 335. The permittee shall keep records

of all sludges removed from the wastewater treatment plant site. Such records will include the following information:

a. Volume (dry weight basis) of sludge disposed
b. Date of disposal
c. Identity and registration number of hauler
d. Location and registration or permit number of disposal site
e. Method of final disposal

The above records shall be maintained on a monthly basis and be available at the plant site for inspection by authorized representatives of the Texas Commission on Environmental Quality for at least five years.

10. MIXING ZONE DEFINITION

For Outfalls 001 and 003, toxic criteria apply at the edge of the mixing zone. The mixing zone is defined as a volume of water within a radius of 100 feet extending over the receiving water from the pont where the discharges reach Welsh Reservoir.

11. Welsh Reservoir is permitted as an industrial cooling impoundment under Certification of Adjudication No. 04-4576, and is exempt from numeric temperature criteria or a maximum temperature differential as provided in 30 TAC §307.4(f). Welsh Reservoir shall be maintained as to not interfere with the reasonable use of such waters.

12. SELENIUM MONITORING PROGRAM:

The permittee shall comply with all necessary sampling requirements in the Selenium Monitoring Program, Welsh Reservoir, as approved by the Executive Director. Revisions to the Selenium Monitoring Program must be approved by the Water Quality Assessment Team (MC-150), Water Quality Division, TCEQ prior to initiating any modifications.

13. TEMPORARY VARIANCE TO TEXAS SURFACE WATER QUALITY STANDARDS

a. In accordance with 30 TAC §307.2(d)(4), the permittee is granted an extension to the temporary variance to the existing acute aquatic-life criteria for aluminum in the Texas Surface Water Quality Standards (30 TAC Chapter 307) for Welsh Reservoir, discharging to Big Cypress Creek Below Lake Bob Sandlin, Segment No. 0404 of the Cypress Creek River Basin.

b. The permittee has completed a water effects ratio (WER) study for aluminum in Welsh Reservoir, discharging to Big Cypress Creek Below Lake Bob Sandlin, Segment No. 0404. The study has been approved by the Water Quality Standards Team (MC-150) of the TCEQ Water Quality Division.

c. A site specific standard for aluminum in Welsh Reservoir, discharging to Big Cypress Creek Below Lake Bob Sandlin, Segment No. 0404 of the Trinity River Basin will be processed pending United States Environmental Protection Agency final approval of the WER Study and 2000 Texas Surface Water Quality Standards (TSWQS) allowing the use of WER studies to calculate water quality-based effluent limitations.

d. The following effluent limitations for total aluminum will become effective immediately in a reissued permit if the final WER Study does not receive approval. However, if approvals of the final WER Study and 2000 Texas Surface Water Quality Standards are delayed beyond the expiration of the permit, the permittee may apply for a variance extension in accordance with 30 TAC Chapter 307.2(f). If the final

WER Study and/or 2000 Texas Surface Water Quality Standards are not approved, the permittee may apply for a permit schedule to meet the following limits in accordance with 30 TAC § 307.2(f).

Outfall Number	Pollutant	Daily Average	Daily Maximum
001	Aluminum, Total	1.4 mg/L	2.9 mg/L
		234 lbs/day	484 lbs/day

If the final WER Study and 2000 Texas Surface Water Quality Standards are adopted, the new site-specific criterion may be used to calculate effluents, and the permittee may apply for an amendment to have the limits above removed from the permit.

14. A site specific partitioning coefficient for total aluminum, 0.46, was approved for use at Outfalls 001 and 003 by the Water Quality Assessment Team in an Interoffice Memorandum dated November 27, 1999 and electronic mail dated February 18, 2003.

CHRONIC BIOMONITORING REQUIREMENTS: FRESHWATER

The provisions of this Section apply individually and separately to Outfalls 001 and 003 for whole effluent toxicity testing (biomonitoring).

1. Scope, Frequency and Methodology

a. The permittee shall test the effluent for toxicity in accordance with the provisions below. Such testing will determine if an appropriately dilute effluent sample adversely affects the survival, reproduction, or growth of the test organism(s). Toxicity is herein defined as a statistically significant difference at the 95% confidence level between the survival, reproduction, or growth of the test organism(s) in a specified effluent dilution compared to the survival, reproduction, or growth of the test organism(s) in the control (0% effluent).

b. The permittee shall conduct the following toxicity tests utilizing the test organisms, procedures and quality assurance requirements specified in this Part of the permit and in accordance with "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition" (EPA-821-R-02-013), or the most recent update thereof:

1) Chronic static renewal survival and reproduction test using the water flea (*Ceriodaphnia dubia*) (Method 1002.0 or the most recent update thereof). This test should be terminated when 60% of the surviving adults in the control produce three broods. This test shall be conducted once per six months.

2) Chronic static renewal 7-day larval survival and growth test using the fathead minnow (*Pimephales promelas*) (Method 1000.0 or the most recent update thereof). A minimum of five replicates with eight organisms per replicate shall be used in the control and in each dilution. This test shall be conducted once per six months.

The permittee must perform and submit a valid test for each test species during the required reporting period for that species. The repeat test shall include the control and all effluent dilutions and use the appropriate number of organisms and replicates, as specified above or in the referenced methods. An invalid test is herein defined as any test failing to satisfy the test acceptability criteria, procedures, and quality assurance requirements specified in the test methods and permit.

c. The permittee shall use five effluent dilution concentrations and a control in each toxicity test. These additional effluent concentrations are:

Outfall 001:	8%, 10%, 14%, 18%, and 24% effluent. The critical dilution is defined as 18% effluent.
Outfall 003:	32%, 42%, 56%, 75%, and 100% effluent. The critical dilution is defined as 100% effluent.

The critical dilution is the effluent concentration representative of the proportion of effluent in the receiving water during critical low flow or critical mixing conditions.

d. This permit may be amended to require a Whole Effluent Toxicity (WET) limit, Chemical-Specific (CS) limits, a Best Management Practice (BMP), additional toxicity testing, and/or other appropriate actions to address toxicity. The permittee may be required to conduct additional biomonitoring tests and/or a Toxicity Reduction Evaluation (TRE) if biomonitoring data indicate multiple numbers of unconfirmed toxicity events.

2. Required Toxicity Testing Conditions

a. Test Acceptance - The permittee shall repeat any toxicity test, including the control and all effluent dilutions, which fails to meet any of the following criteria:

1) a control mean survival of 80% or greater;

2) a control mean number of water flea neonates per surviving adult of 15 or greater;

3) a control mean dry weight of surviving fathead minnow larvae of 0.25 mg or greater;

4) a control Coefficient of Variation percent (CV%) of 40 or less in between replicates for the young of surviving females in the water flea reproduction and survival test; and the growth and survival endpoints in the fathead minnow growth and survival test.

5) a critical dilution CV% of 40 or less for young of surviving females in the water flea reproduction and survival test; and the growth and survival endpoints for the fathead minnow growth and survival test. However, if statistically significant lethal or nonlethal effects are exhibited at the critical dilution, a CV% greater than 40 shall not invalidate the test.

b. Statistical Interpretation

1) If the conditions of test acceptability are met and the survival of the test organism is equal to or greater than 80% in the critical dilution and all dilutions below that, the test shall be considered a passing test. The permittee shall report a No Observed Effect Concentration (NOEC) of not less than the critical dilution for the reporting requirements. The NOEC is defined as the greatest effluent dilution at or below which no significant lethality is demonstrated. Significant lethality is defined as a statistically significant difference, at the 95% confidence level, between the survival of the test organism in a specified effluent dilution when compared to the survival of the test organism in the control.

2) For the water flea survival test, the statistical analyses used to determine if there is a significant difference between the control and an effluent dilution shall be Fisher's Exact Test as described in the "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition" (EPA-821-R-02-013), or the most recent update thereof.

3) For the water flea reproduction test and the fathead minnow larval survival and growth tests, the statistical analyses used to determine if there is a significant difference between the control and an effluent dilution shall be in accordance with the methods for determining the NOEC as described in the "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition" (EPA-821-R-02-013), or the most recent update thereof.

c. Dilution Water

1) Dilution water used in the toxicity tests shall be the receiving water collected as close as possible to the discharge point, but unaffected by the discharge.

2) Where the receiving water proves unsatisfactory as a result of preexisting instream toxicity (i.e. fails to fulfill the test acceptance criteria of item 2.a.), the permittee may substitute synthetic

dilution water for the receiving water in all subsequent tests provided the unacceptable receiving water test met the following stipulations:

a) a synthetic lab water control was performed (in addition to the receiving water control) which fulfilled the test acceptance requirements of item 2.a;

b) the test indicating receiving water toxicity was carried out to completion (i.e., 7 days);

c) the permittee submitted all test results indicating receiving water toxicity with the reports and information required in Part 3 of this Section.

The synthetic dilution water shall have a pH, hardness, and alkalinity similar to that of the receiving water or a natural water in the drainage basin that is unaffected by the discharge, provided the magnitude of these parameters will not cause toxicity in a synthetic dilution water control that has been formulated to match the pH, hardness, and alkalinity naturally found in the receiving water. Upon approval, the permittee may substitute other appropriate dilution water with chemical and physical characteristics similar to that of the receiving water.

d. Samples and Composites

1) The permittee shall collect a minimum of three flow-weighted 24-hour composite samples, individually and separately, from Outfalls 001 and 003. The second and third 24-hour composite samples will be used for the renewal of the dilution concentrations for each toxicity test. A 24-hour composite sample consists of a minimum of 12 effluent portions collected at equal time intervals representative of a 24-hour operating day and combined proportionally to flow, or a sample continuously collected proportionally to flow over a 24-hour operating day.

2) The permittee shall collect the 24-hour composite samples such that the samples are representative of any periodic episode of chlorination, biocide usage, or other potentially toxic substance discharged on an intermittent basis.

3) The permittee shall initiate the toxicity tests within 36 hours after collection of the last portion of the first 24-hour composite sample. The holding time for any subsequent 24-hour composite sample shall not exceed 72 hours. Samples shall be maintained at a temperature of 4 degrees Centigrade during collection, shipping, and storage.

4) If flow from the outfall being tested ceases during the collection of effluent samples, the requirements for the minimum number of effluent samples, the minimum number of effluent portions, and the sample holding time, are waived during that sampling period. However, the permittee must have collected an effluent composite sample volume sufficient to complete the required toxicity tests with daily renewal of the effluent. When possible, the effluent samples used for the toxicity tests shall be collected on separate days if the discharge occurs over multiple days. The effluent composite sample collection duration and the static renewal protocol associated with the abbreviated sample collection must be documented in the full report required in Part 3 of this Section.

3. Reporting

All reports, tables, plans, summaries, and related correspondence required in any Part of this Section shall be submitted to the attention of the Water Quality Assessment Team (MC 150) of the Water Quality Division.

a. The permittee shall prepare a full report of the results of all tests conducted pursuant to this permit in accordance with the Report Preparation Section of "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition" (EPA-821-R-02-013), or the most recent update thereof, for every valid and invalid toxicity test initiated whether carried to completion or not. All full reports shall be retained for 3 years at the plant site and shall be available for inspection by TCEQ personnel.

b. A full report must be submitted with the first valid biomonitoring test results for each test species and with the first test results any time the permittee subsequently employs a different test laboratory. Full reports need not be submitted for subsequent testing unless specifically requested. The permittee shall routinely report the results of each biomonitoring test on the Tables 1 and 2 forms provided with this permit. All Tabless 1 and 2 reports must include the information specified in the Tables 1 and 2 forms attached to this permit.

1) Annual biomonitoring test results are due on or before January 20th for biomonitoring conducted during the previous 12 month period.

2) Semiannual biomonitoring test results are due on or before July 20th and January 20th for biomonitoring conducted during the previous 6 month period.

3) Quarterly biomonitoring test results are due on or before April 20th, July 20th, October 20th, and January 20th, for biomonitoring conducted during the previous calendar quarter.

4) Monthly biomonitoring test results are due on or before the 20th day of the month following sampling.

c. Enter the following codes on the DMR for the appropriate parameters for valid tests only:

1) For the water flea, Parameter TLP3B, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."

2) For the water flea, Parameter TOP3B, report the NOEC for survival.

3) For the water flea, Parameter TPP3B, report the NOEC for reproduction.

4) For the fathead minnow, Parameter TLP6C,enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."

5) For the fathead minnow, Parameter TOP6C, report the NOEC for survival.

6) For the fathead minnow, Parameter TPP6C, report the NOEC for growth.

d. Enter the following codes on the DMR for retests only:

1) For retest number 1, Parameter 22415, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."

2) For retest number 2, Parameter 22416, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."

4. Persistent Lethality

The requirements of this Part apply only when a toxicity test demonstrates significant lethality at or below the critical dilution. Significant lethality is defined as a statistically significant difference, at the 95% confidence level, between the survival of the test organism in a specified effluent dilution when compared to the survival of the test organism in the control.

a. The permittee shall conduct a total of two additional tests (retests) for any species that demonstrates significant lethality at or below the critical dilution. The two retests shall be conducted monthly during the next two consecutive months. The permittee shall not substitute either of the two retests in lieu of routine toxicity testing. All reports shall be submitted within 20 days of test completion. Test completion is defined as the last day of the test. The retests shall also be reported on the DMRs as specified in Part 3.d.

b. If one or both of the two retests specified in item 4.a. demonstrates significant lethality at or below the critical dilution, the permittee shall initiate the TRE requirements as specified in Part 5.

c. The provisions of item 4.a. are suspended upon completion of the two retests and submittal of the TRE Action Plan and Schedule defined in Part 5 of this Section.

5. Toxicity Reduction Evaluation

a. Within 45 days of the last test day of the retest that confirms significant lethality at or below the critical dilution, the permittee shall submit a General Outline for initiating a TRE. The outline shall include, but not be limited to, a description of project personnel, a schedule for obtaining consultants (if needed), a discussion of influent and/or effluent data available for review, a sampling and analytical schedule, and a proposed TRE initiation date.

b. Within 90 days of the last test day of the retest that confirms significant lethality at or below the critical dilution, the permittee shall submit a TRE Action Plan and Schedule for conducting a TRE. The plan shall specify the approach and methodology to be used in performing the TRE. A Toxicity Reduction Evaluation is a step-wise investigation combining toxicity testing with physical and chemical analysis to determine actions necessary to eliminate or reduce effluent toxicity to a level not effecting significant lethality at the critical dilution. The TRE Action Plan shall lead to the successful elimination of significant lethal effects at the critical dilution for both test species defined in item 1.b. As a minimum, the TRE Action Plan shall include the following:

1) Specific Activities - The TRE Action Plan shall specify the approach the permittee intends to utilize in conducting the TRE, including toxicity characterizations, identifications, confirmations, source evaluations, treatability studies, and/or alternative approaches. When conducting characterization analyses, the permittee shall perform multiple characterizations and follow the procedures specified in the document entitled, "Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I" (EPA/600/6-91/005F), or alternate procedures. The permittee shall perform multiple identifications and follow the methods specified in the documents entitled, "Methods for Aquatic Toxicity Identification Evaluations, Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/080) and "Methods for Aquatic Toxicity Identification Evaluations, Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/081). All characterization, identification, and confirmation tests shall be conducted in an orderly and logical progression;

2) Sampling Plan - The TRE Action Plan should describe sampling locations, methods, holding times, chain of custody, and preservation techniques. The effluent sample volume collected for all tests shall be adequate to perform the toxicity characterization/ identification/ confirmation procedures, and chemical-specific analyses when the toxicity tests show significant lethality. Where the permittee has identified or suspects specific pollutant(s) and/or source(s) of effluent toxicity, the permittee shall conduct, concurrent with toxicity testing, chemical-specific analyses for the identified and/or suspected pollutant(s) and/or source(s) of effluent toxicity;

3) Quality Assurance Plan - The TRE Action Plan should address record keeping and data evaluation, calibration and standardization, baseline tests, system blanks, controls, duplicates, spikes, toxicity persistence in the samples, randomization, reference toxicant control charts, as well as mechanisms to detect artifactual toxicity; and

4) Project Organization - The TRE Action Plan should describe the project staff, project manager, consulting engineering services (where applicable), consulting analytical and toxicological services, etc.

c. Within 30 days of submittal of the TRE Action Plan and Schedule, the permittee shall implement the TRE with due diligence.

d. The permittee shall submit quarterly TRE Activities Reports concerning the progress of the TRE. The quarterly reports are due on or before April 20th, July 20th, October 20th, and January 20th. The report shall detail information regarding the TRE activities including:

1) results and interpretation of any chemical specific analyses for the identified and/or suspected pollutant(s) performed during the quarter;

2) results and interpretation of any characterization, identification, and confirmation tests performed during the quarter;

3) any data and/or substantiating documentation which identifies the pollutant(s) and/or source(s) of effluent toxicity;

4) results of any studies/evaluations concerning the treatability of the facility's effluent toxicity;

5) any data which identifies effluent toxicity control mechanisms that will reduce effluent toxicity to the level necessary to meet no significant lethality at the critical dilution; and

6) any changes to the initial TRE Plan and Schedule that are believed necessary as a result of the TRE findings.

Copies of the TRE Activities Report shall also be submitted to the U.S. EPA Region 6 office.

e. During the TRE, the permittee shall perform, at a minimum, quarterly testing using the more sensitive species; testing for the less sensitive species shall continue at the frequency specified in Part 1.b. If the effluent ceases to effect significant lethality (herein as defined below) the permittee may end the TRE. A "cessation of lethality" is defined as no significant lethality at the critical dilution for a period of 12 consecutive months with at least monthly testing. At the end of the 12 months, the permittee shall submit a statement of intent to cease the TRE and may then resume the testing frequency specified in Part 1.b.

This provision does not apply as a result of corrective actions taken by the permittee. "Corrective actions" are herein defined as proactive efforts which eliminate or reduce effluent toxicity. These include, but are not limited to, source reduction or elimination, improved housekeeping, changes in chemical usage, and modifications of influent streams and/or effluent treatment.

The permittee may only apply this cessation of lethality provision once. If the effluent again demonstrates significant lethality to the same species, then this permit will be amended to add a WET limit with a compliance period, if appropriate. However, prior to the effective date of the WET limit, the permittee may apply for a permit amendment removing the WET limit, in lieu of an alternate toxicity control measure, by identifying and confirming the toxicant and/or an appropriate control measure.

f. The permittee shall complete the TRE and submit a Final Report on the TRE Activities no later than 28 months from the last test day of the retest that confirmed significant lethal effects at the critical dilution. The permittee may petition the Executive Director (in writing) for an extension of the 28-month limit. However, to warrant an extension the permittee must have demonstrated due diligence in their pursuit of the TIE/TRE and must prove that circumstances beyond their control stalled the TIE/TRE. The report shall provide information pertaining to the specific control mechanism(s) selected that will, when implemented, result in reduction of effluent toxicity to no significant lethality at the critical dilution. The report will also provide a specific corrective action schedule for implementing the selected control mechanism(s). A copy of the TRE Final Report shall also be submitted to the U.S. EPA Region 6 office.

g. Based upon the results of the TRE and proposed corrective actions, this permit may be amended to modify the biomonitoring requirements where necessary, to require a compliance schedule for implementation of corrective actions, to specify a WET limit, to specify a BMP, and/or to specify Chemical-Specific (CS) limits.

OUTFALL 001

TABLE 1 (SHEET 1 OF 4)

BIOMONITORING REPORTING

CERIODAPHNIA DUBIA SURVIVAL AND REPRODUCTION

		Date	Time		Date	Time
Dates and Times Composites Collected	No. 1 FROM:			TO:		
	No. 2 FROM:			TO:		
	No. 3 FROM:			TO:		

Test initiated:_____am/pm _____date

Dilution water used: _____ Receiving Water _____ Synthetic Dilution Water

NUMBER OF YOUNG PRODUCED PER ADULT AT END OF TEST

	Percent effluent (%)					
REP	0%	8%	10%	14%	18%	24%
A						
B						
C						
D						
E						
F						
G						
H						
I						
J						
Surviv. Mean						
Total Mean						
CV%*						

*coefficient of variation = standard deviation x 100/mean (calculation based on young of the surviving adults)

Designate males (M), and dead females (D), along with number of neonates (x) released prior to death.

OUTFALL 001

TABLE 1 (SHEET 2 OF 4)

BIOMONITORING REPORTING

CERIODAPHNIA DUBIA SURVIVAL AND REPRODUCTION TEST

1. Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:

   Is the mean number of young produced per adult significantly less (p=0.05) than the number of young per adult in the control for the % effluent corresponding to significant nonlethal effects?

   CRITICAL DILUTION (18%): _____ YES _____ NO

PERCENT SURVIVAL

	Percent effluent (%)					
Time of Reading	0%	8%	10%	14%	18%	24%
24h						
48h						
End of Test						

2. Fisher's Exact Test:

   Is the mean survival at test end significantly less (p=0.05) than the control survival for the % effluent corresponding to lethality?

   CRITICAL DILUTION (18%): _____ YES _____ NO

3. Enter percent effluent corresponding to each NOEC below :

   a.) NOEC survival = _____% effluent

   b.) NOEC reproduction = _____% effluent

OUTFALL 001

TABLE 1 (SHEET 3 OF 4)

BIOMONITORING REPORTING

FATHEAD MINNOW LARVAE GROWTH AND SURVIVAL

		Date	Time		Date	Time
Dates and Times Composites Collected	No. 1 FROM:			TO:		
	No. 2 FROM:			TO:		
	No. 3 FROM:			TO:		

Test initiated:_____am/pm _____date

Dilution water used: _____ Receiving Water _____ Synthetic Dilution Water

FATHEAD MINNOW GROWTH DATA

Effluent Concentration (%)	Average Dry Weight in milligrams in replicate chambers					Mean Dry Weight	CV%*
	A	B	C	D	E		
0%							
8%							
10%							
14%							
18%							
24%							

* coefficient of variation = standard deviation x 100/mean

1. Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:

   Is the mean dry weight (growth) at 7 days significantly less (p=0.05) than the control's dry weight (growth) for the % effluent corresponding to significant nonlethal effects?

   CRITICAL DILUTION (18%): _____ YES _____ NO

OUTFALL 001

TABLE 1 (SHEET 4 OF 4)

BIOMONITORING REPORTING

FATHEAD MINNOW GROWTH AND SURVIVAL TEST

FATHEAD MINNOW SURVIVAL DATA

Effluent Concentration (%)	Percent Survival in replicate chambers					Mean percent survival			CV %*
	A	B	C	D	E	24h	48h	7 day	
0%									
8%									
10%									
14%									
18%									
24%									

* coefficient of variation = standard deviation x 100/mean

2. Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:

   Is the mean survival at 7 days significantly less (p=0.05) than the control survival for the % effluent corresponding to lethality?

   CRITICAL DILUTION (18%): _____ YES _____ NO

3. Enter percent effluent corresponding to each NOEC below:

   a.) NOEC survival = _____% effluent

   b.) NOEC growth = _____% effluent

OUTFALL 003

TABLE 2 (SHEET 1 OF 4)

BIOMONITORING REPORTING

CERIODAPHNIA DUBIA SURVIVAL AND REPRODUCTION

		Date	Time	Date	Time
Dates and Times Composites Collected	No. 1 FROM:			TO:	
	No. 2 FROM:			TO:	
	No. 3 FROM:			TO:	

Test initiated:_____am/pm _____date

Dilution water used: _____ Receiving Water _____ Synthetic Dilution Water

NUMBER OF YOUNG PRODUCED PER ADULT AT END OF TEST

	Percent effluent (%)					
REP	0%	32%	42%	56%	75%	100%
A						
B						
C						
D						
E						
F						
G						
H						
I						
J						
Surviv. Mean						
Total Mean						
CV%*						

*coefficient of variation = standard deviation x 100/mean (calculation based on young of the surviving adults)

Designate males (M), and dead females (D), along with number of neonates (x) released prior to death.

OUTFALL 003

TABLE 2 (SHEET 2 OF 4)

BIOMONITORING REPORTING

CERIODAPHNIA DUBIA SURVIVAL AND REPRODUCTION TEST

1. Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:

   Is the mean number of young produced per adult significantly less (p=0.05) than the number of young per adult in the control for the % effluent corresponding to significant nonlethal effects?

   CRITICAL DILUTION (100%): _____ YES _____ NO

PERCENT SURVIVAL

	Percent effluent (%)					
Time of Reading	0%	32%	42%	56%	75%	100%
24h						
48h						
End of Test						

2. Fisher's Exact Test:

   Is the mean survival at test end significantly less (p=0.05) than the control survival for the % effluent corresponding to lethality?

   CRITICAL DILUTION (100%): _____ YES _____ NO

3. Enter percent effluent corresponding to each NOEC below :

   a.) NOEC survival = _____% effluent

   b.) NOEC reproduction = _____% effluent

OUTFALL 003

TABLE 2 (SHEET 3 OF 4)

BIOMONITORING REPORTING

FATHEAD MINNOW LARVAE GROWTH AND SURVIVAL

		Date	Time		Date	Time
Dates and Times Composites Collected	No. 1 FROM:			TO:		
	No. 2 FROM:			TO:		
	No. 3 FROM:			TO:		

Test initiated:_____am/pm _____date

Dilution water used: _____ Receiving Water _____ Synthetic Dilution Water

FATHEAD MINNOW GROWTH DATA

Effluent Concentration (%)	Average Dry Weight in milligrams in replicate chambers					Mean Dry Weight	CV%*
	A	B	C	D	E		
0%							
32%							
42%							
56%							
75%							
100%							

* coefficient of variation = standard deviation x 100/mean

1. Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:

   Is the mean dry weight (growth) at 7 days significantly less (p=0.05) than the control's dry weight (growth) for the % effluent corresponding to significant nonlethal effects?

   CRITICAL DILUTION (100%): _____ YES _____ NO

OUTFALL 003

TABLE 2 (SHEET 4 OF 4)

BIOMONITORING REPORTING

FATHEAD MINNOW GROWTH AND SURVIVAL TEST

FATHEAD MINNOW SURVIVAL DATA

Effluent Concentration (%)	Percent Survival in replicate chambers					Mean percent survival			CV %*
	A	B	C	D	E	24h	48h	7 day	
0%									
32%									
42%									
56%									
75%									
100%									

* coefficient of variation = standard deviation x 100/mean

2. Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:

   Is the mean survival at 7 days significantly less (p=0.05) than the control survival for the % effluent corresponding to lethality?

   CRITICAL DILUTION (100%): _____ YES _____ NO

3. Enter percent effluent corresponding to each NOEC below:

   a.) NOEC survival = _____% effluent

   b.) NOEC growth = _____% effluent

24-HOUR ACUTE BIOMONITORING REQUIREMENTS: FRESHWATER

The provisions of this Section apply individually and separately to Outfalls 001 and 003 for whole effluent toxicity testing (biomonitoring). No samples or portions of samples from one outfall may be composited with samples or portions of samples from another outfall.

1. Scope, Frequency and Methodology

a. The permittee shall test the effluent for lethality in accordance with the provisions in this Section. Such testing will determine compliance with the Surface Water Quality Standard, 30 TAC §307.6(e)(2)(B), of greater than 50% survival of the appropriate test organisms in 100% effluent for a 24-hour period.

b. The toxicity tests specified shall be conducted once per six months. The permittee shall conduct the following toxicity tests utilizing the test organisms, procedures, and quality assurance requirements specified in this section of the permit and in accordance with "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, Fifth Edition" (EPA-821-R-02-012), or the most recent update thereof:

1) Acute 24-hour static toxicity test using the water flea (*Daphnia pulex*). A minimum of five replicates with eight organisms per replicate shall be used in the control and in each dilution.

2) Acute 24-hour static toxicity test using the fathead minnow (*Pimephales promelas*). A minimum of five replicates with eight organisms per replicate shall be used in the control and in each dilution.

A valid test result must be submitted for each reporting period. The permittee must report, then repeat, an invalid test during the same reporting period. The repeat test shall include the control and all effluent dilutions and use the appropriate number of organisms and replicates, as specified above. An invalid test is herein defined as any test failing to satisfy the test acceptability criteria, procedures, and quality assurance requirements specified in the test methods and permit.

c. In addition to an appropriate control, a 100% effluent concentration shall be used in the toxicity tests. Except as discussed in item 2.b., the control and/or dilution water shall consist of a standard, synthetic, moderately hard, reconstituted water.

d. This permit may be amended to require a Whole Effluent Toxicity (WET) limit, a Best Management Practice (BMP), Chemical-Specific (CS) limits, additional toxicity testing, and/or other appropriate actions to address toxicity. The permittee may be required to conduct additional biomonitoring tests and/or a Toxicity Reduction Evaluation (TRE) if biomonitoring data indicate multiple numbers of unconfirmed toxicity events.

e. As the biomonitoring dilution series specified in the Chronic biomonitoring requirements includes a 100% effluent concentration, those results fulfill the requirements of this Section. The results of any test with a 100% effluent concentration performed in the proper time interval may be substituted in lieu of performing a separate 24-hour acute test. Compliance with be evaluated as specified in Item a. The greater than 50% survival in 100% effluent for a 24-hour period standard applies to all tests utilizing a 100% dilution, regardless of whether the results are submitted to comply with the minimum testing frequency defined in Item b.

2. Required Toxicity Testing Conditions

a. Test Acceptance - The permittee shall repeat any toxicity test, including the control, if the control fails to meet a mean survival equal to or greater than 90%.

b. Dilution Water - In accordance with item 1.c., the control and/or dilution water shall normally consist of a standard, synthetic, moderately hard, reconstituted water. If the permittee utilizes the results of a 48-Hour Acute test or a Chronic test to satisfy the requirements in item 1.e., the permittee may use the receiving water or dilution water that meets the requirements of item 2.a. as the control and dilution water.

c. Samples and Composites

1) The permittee shall collect one flow-weighted 24-hour composite samples, individually and separately, from Outfalls 001 and 003. A 24-hour composite sample consists of a minimum of 12 effluent portions collected at equal time intervals representative of a 24-hour operating day and combined proportional to flow, or a sample continuously collected proportional to flow over a 24-hour operating day.

2) The permittee shall collect the 24-hour composite samples such that the samples are representative of any periodic episode of chlorination, biocide usage, or other potentially toxic substance discharged on an intermittent basis.

3) The permittee shall initiate the toxicity tests within 36 hours after collection of the last portion of the 24-hour composite sample. Samples shall be maintained at a temperature of 4 degrees Centigrade during collection, shipping, and storage.

4) If the Outfall ceases discharging during the collection of the effluent composite sample, the requirements for the minimum number of effluent portions are waived. However, the permittee must have collected a composite sample volume sufficient for completion of the required test. The abbreviated sample collection, duration, and methodology must be documented in the full report required in Part 3 of this Section.

3. Reporting

All reports, tables, plans, summaries, and related correspondence required in any Part of this Section shall be submitted to the attention of the Water Quality Assessment Team (MC 150) of the Water Quality Division.

a. The permittee shall prepare a full report of the results of all tests conducted pursuant to this permit in accordance with the Report Preparation Section of "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, Fifth Edition" (EPA-821-R-02-012), or the most recent update thereof, for every valid and invalid toxicity test initiated. All full reports shall be retained for three years at the plant site and shall be available for inspection by TCEQ personnel.

b. A full report must be submitted with the first valid biomonitoring test results for each test species and with the first test results any time the permittee subsequently employs a different test laboratory. Full reports need not be submitted for subsequent testing unless specifically requested. The permittee shall routinely report the results of each biomonitoring test on the Tables 3 and 4 forms provided with this permit. All Tables 3 and 4 reports must include the information specified in the Tables 3 and 4 forms attached to this permit.

1) Semiannual biomonitoring test results are due on or before January 20th and July 20th for biomonitoring conducted during the previous 6 month period.

2) Quarterly biomonitoring test results are due on or before January 20th, April 20th, July 20th, and October 20th, for biomonitoring conducted during the previous calendar quarter.

c. Enter the following codes on the DMR for the appropriate parameters for valid tests only:

1) For the water flea, Parameter TIE3D, enter a "0" if the mean survival at 24-hours is greater than 50% in the 100% effluent dilution; if the mean survival is less than or equal to 50%, enter a "1."

2) For the fathead minnow, Parameter TIE6C, enter a "0" if the mean survival at 24-hours is greater than 50% in the 100% effluent dilution; if the mean survival is less than or equal to 50%, enter a "1."

d. Enter the following codes on the DMR for retests only:

1) For retest number 1, Parameter 22415, enter a "0" if the mean survival at 24-hours is greater than 50% in the 100% effluent dilution; if the mean survival is less than or equal to 50%, enter a "1."

2) For retest number 2, Parameter 22416, enter a "0" if the mean survival at 24-hours is greater than 50% in the 100% effluent dilution; if the mean survival is less than or equal to 50%, enter a "1."

4. Persistent Mortality

The requirements of this Part apply when a toxicity test demonstrates significant lethality, here defined as a mean mortality of 50% or greater to organisms exposed to the 100% effluent concentration after 24-hours.

a. The permittee shall conduct two additional tests (retests) for each species that demonstrates significant lethality. The two retests shall be conducted once per week for two weeks. Five effluent dilution concentrations in addition to an appropriate control shall be used in the retests. These additional effluent concentrations are 6%, 13%, 25%, 50% and 100% effluent. The first retest shall be conducted within 15 days of the laboratory determination of significant lethality. All test results shall be submitted within 20 days of test completion of the second retest. Test completion is defined as the 24th hour. The retests shall also be reported on the DMRs as specified in Part 3.d.

b. If one or both of the two retests specified in item 4.a. demonstrates significant lethality, the permittee shall initiate the TRE requirements as specified in Part 5 of this Section.

5. Toxicity Reduction Evaluation

a. Within 45 days of the retest that demonstrates significant lethality, the permittee shall submit a General Outline for initiating a TRE. The outline shall include, but not be limited to, a description of project personnel, a schedule for obtaining consultants (if needed), a discussion of influent and/or effluent data available for review, a sampling and analytical schedule, and a proposed TRE initiation date.

b. Within 90 days of the retest that demonstrates significant lethality, the permittee shall submit a TRE Action Plan and Schedule for conducting a TRE. The plan shall specify the approach and methodology to be used in performing the TRE. A Toxicity Reduction Evaluation is a step-wise investigation combining toxicity testing with physical and chemical analysis to determine actions necessary to eliminate or reduce effluent toxicity to a level not effecting significant lethality at the critical dilution.

The TRE Action Plan shall lead to the successful elimination of significant lethality for both test species defined in item 1.b. As a minimum, the TRE Action Plan shall include the following:

1) Specific Activities - The TRE Action Plan shall specify the approach the permittee intends to utilize in conducting the TRE, including toxicity characterizations, identifications, confirmations, source evaluations, treatability studies, and/or alternative approaches. When conducting characterization analyses, the permittee shall perform multiple characterizations and follow the procedures specified in the document entitled, "Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures" (EPA/600/6-91/003), or alternate procedures. The permittee shall perform multiple identifications and follow the methods specified in the documents entitled, "Methods for Aquatic Toxicity Identification Evaluations, Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/60-0/R-92/080) and "Methods for Aquatic Toxicity Identification Evaluations, Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/081). All characterization, identification, and confirmation tests shall be conducted in an orderly and logical progression;

2) Sampling Plan - The TRE Action Plan should describe sampling locations, methods, holding times, chain of custody, and preservation techniques. The effluent sample volume collected for all tests shall be adequate to perform the toxicity characterization/ identification/ confirmation procedures, and chemical-specific analyses when the toxicity tests show significant lethality. Where the permittee has identified or suspects specific pollutant(s) and/or source(s) of effluent toxicity, the permittee shall conduct, concurrent with toxicity testing, chemical-specific analyses for the identified and/or suspected pollutant(s) and/or source(s) of effluent toxicity;

3) Quality Assurance Plan - The TRE Action Plan should address record keeping and data evaluation, calibration and standardization, baseline tests, system blanks, controls, duplicates, spikes, toxicity persistence in the samples, randomization, reference toxicant control charts, as well as mechanisms to detect artifactual toxicity; and

4) Project Organization - The TRE Action Plan should describe the project staff, project manager, consulting engineering services (where applicable), consulting analytical and toxicological services, etc.

c. Within 30 days of submittal of the TRE Action Plan and Schedule, the permittee shall implement the TRE with due diligence.

d. The permittee shall submit quarterly TRE Activities Reports concerning the progress of the TRE. The quarterly TRE Activities Reports are due on or before April 20th, July 20th, October 20th, and January 20th. The report shall detail information regarding the TRE activities including:

1) results and interpretation of any chemical-specific analyses for the identified and/or suspected pollutant(s) performed during the quarter;

2) results and interpretation of any characterization, identification, and confirmation tests performed during the quarter;

3) any data and/or substantiating documentation which identifies the pollutant(s) and/or source(s) of effluent toxicity;

4) results of any studies/evaluations concerning the treatability of the facility's effluent toxicity;

5) any data which identifies effluent toxicity control mechanisms that will reduce effluent toxicity to the level necessary to eliminate significant lethality; and

6) any changes to the initial TRE Plan and Schedule that are believed necessary as a result of the TRE findings.

Copies of the TRE Activities Report shall also be submitted to the U.S. EPA Region 6 office.

e. During the TRE, the permittee shall perform, at a minimum, quarterly testing using the more sensitive species; testing for the less sensitive species shall continue at the frequency specified in Part 1.b. If the effluent ceases to effect significant lethality (herein as defined below) the permittee may end the TRE. A "cessation of lethality" is defined as no significant lethality at the critical dilution for a period of 12 consecutive weeks with at least weekly testing. At the end of the 12 weeks, the permittee shall submit a statement of intent to cease the TRE and may then resume the testing frequency specified in Part 1.b.

This provision does not apply as a result of corrective actions taken by the permittee. "Corrective actions" are herein defined as proactive efforts which eliminate or reduce effluent toxicity. These include, but are not limited to, source reduction or elimination, improved housekeeping, changes in chemical usage, and modifications of influent streams and/or effluent treatment.

The permittee may only apply this cessation of lethality provision once. If the effluent again demonstrates significant lethality to the same species, then this permit will be amended to add a WET limit with a compliance period, if appropriate. However, prior to the effective date of the WET limit, the permittee may apply for a permit amendment removing the WET limit, in lieu of an alternate toxicity control measure, by identifying and confirming the toxicant and/or an appropriate control measure.

f. The permittee shall complete the TRE and submit a Final Report on the TRE Activities no later than 18 months from the last test day of the retest that demonstrates significant lethality. The permittee may petition the Executive Director (in writing) for an extension of the 18-month limit. However, to warrant an extension the permittee must have demonstrated due diligence in their pursuit of the TIE/TRE and must prove that circumstances beyond their control stalled the TIE/TRE. The report shall specify the control mechanism(s) that will, when implemented, reduce effluent toxicity as specified in item 5.g. The report will also specify a corrective action schedule for implementing the selected control mechanism(s). A copy of the TRE Final Report shall also be submitted to the U.S. EPA Region 6 office.

g. Within three years of the last day of the test confirming toxicity, the permittee shall comply with 30 TAC 307.6.(e)(2)(B), which requires greater than 50% survival of the test organism in 100% effluent at the end of 24-hours. The permittee may petition the Executive Director (in writing) for an extension of the 3-year limit. However, to warrant an extension the permittee must have demonstrated due diligence in their pursuit of the TIE/TRE and must prove that circumstances beyond their control stalled the TIE/TRE.

The requirement to comply with 30 TAC 307.6.(e)(2)(B) may be exempted upon proof that toxicity is caused by an excess, imbalance, or deficiency of dissolved salts. This exemption excludes instances where individually toxic components (e.g. metals) form a salt compound. Following the exemption, the permit may be amended to include an ion-adjustment protocol, alternate species testing, or single species testing.

h. Based upon the results of the TRE and proposed corrective actions, this permit may be amended to modify the biomonitoring requirements where necessary, to require a compliance schedule for implementation of corrective actions, to specify a WET limit, to specify a BMP, and/or to specify a Chemical-Specific (CS) limit(s).

TABLE 3 (SHEET 1 OF 2)

WATER FLEA SURVIVAL

GENERAL INFORMATION

	Time (am/pm)	Date
Composite Sample Collected		
Test Initiated		

PERCENT SURVIVAL

Time	Rep	Percent effluent (%)					
		0%	6%	13%	25%	50%	100%
24h	A						
	B						
	C						
	D						
	E						
	MEAN*						

Enter percent effluent corresponding to the LC50 below:

24 hour LC50 (Daphnia or Ceriodaphnia) = _____% effluent
(circle appropriate genus)

95% confidence limits: _____

Method of LC50 calculation:_____

* If 24-hour survivorship data from the chronic Ceriodaphnia dubia test is being used, the mean survival per dilution for all 10 replicates shall be reported on this row.

TABLE 3 (SHEET 2 OF 2)

FATHEAD MINNOW SURVIVAL

GENERAL INFORMATION

	Time (am/pm)	Date
Composite Sample Collected		
Test Initiated		

PERCENT SURVIVAL

Time	Rep	Percent effluent (%)					
		0%	6%	13%	25%	50%	100%
24h	A						
	B						
	C						
	D						
	E						
	MEAN						

Enter percent effluent corresponding to the LC50 below:

24 hour LC50 = _____% effluent

95% confidence limits: _____

Method of LC50 calculation:_____